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SEPTEMBER 17
1936

In the Great Forests of the Pacific Northwest...

HYDRIL

Internal Flush Drill Pipe Joints Insure SPEED-SAFETY-ECONOMY in Wildcat Drilling

When this major-company wildcat was planned for the well-nigh inaccessible timberlands, a string of drill pipe equipped with Hydril Internal Flush Drill Pipe Joints was purchased because it exclusively offered these advantages:

The entire fluid passage is smooth and WIDE OPEN, for the diameter of the hole through the tool joints is the same as the I.D. of the pipe.

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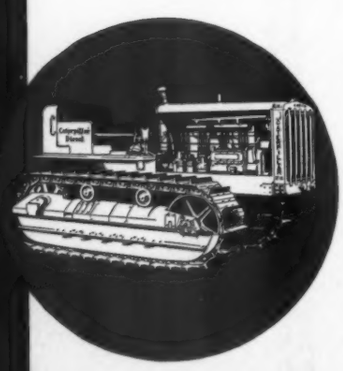

If you are now using a gasoline tractor or motor grader, right now is the time to replace it with a "Caterpillar" Diesel. Its tremendous savings in fuel costs—its low maintenance costs—its power and endurance—are fast obsoleting other forms of power. Today's jobs demand the "Caterpillar" Diesel. You can't do today's jobs with yesterday's power—not if you want minimum costs.

More than 15,000 "Caterpillar" Diesels—tractors, motor graders and engines—are already in use. The number is fast increasing. Resale values of used gasoline tractors have dropped—seem certain to drop further. Replacement now gives you two important advantages—you begin immediately to enjoy the savings of "Caterpillar" Diesel power—you avoid further obsolescence loss on your present equipment. See your dealer for the SHOW-DOWN on this question. Caterpillar Tractor Co., Peoria, Illinois, U. S. A.

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DIESEL

the OIL AND GAS JOURNAL

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SEPTEMBER 17, 1936
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TABLE OF CONTENTS

News Developments

Summary of Situation 19
Sparks From the News 20
Diesel Fuel Demand Assumes Major Proportions—By T. F. SMILEY 21
Organization of Oil Industry Abroad Closely Regulated 24
260 Geophysical Crews Actively at Work in Field—By NEIL WILLIAMS 25
New Record in Domestic Demand for Motor Fuel 26
Oil Industry From Investor's Standpoint—By JOHN D. JAMESON 27
Patman Explains Law to N.P.A. 28
Producer at Manvel Sets Stage for Drilling Campaign—By F. L. SINGLETON 30
Obituaries 32
News From Foreign Lands 35
Editorial 36
Mid-Continent Refinery Operations Slightly Decreased—By D. H. STORMONT 56
Crude Oil Stocks 79

Field Operations

Field Operations Summarized 59
California—By L. P. STOCKMAN 61
Gulf Coast—By F. L. SINGLETON 63-80
Oklahoma—By DAL DALRYMPLE 64
Michigan—By PAUL A. ELLIOTT 68
N. Louisiana-Arkansas—By MITCHELL TUCKER 70
Rocky Mountain Area—By TOLBERT R. INGRAM 72
Kansas—By DAL DALRYMPLE 78
East Texas—By L. E. BREDBERG 82
West and North Texas—By L. E. BREDBERG 84
Southwest Texas—By GEORGE WEBER 88
Canada—By VICTOR LAURISTON 89
Central West—By GEORGE A. WHITNEY 90
Eastern Fields—By STAFF CORRESPONDENT 60
Wildcat Operations ..... 91 to 99

Engineering—Operating

Agrol Gasolines, Will They Succeed?—By W. T. ZIEGENHAIN 38
Devise New Type Pressure Control for Vacuum Tower 40
Operating Ideas 41
Modern Practices Followed in Bradford Field Flood Project—By T. P. SANDERS 42
Drillers Said It Was "Air" Pocket, But It Ruined the Derrick—By L. G. E. BIGNELL 47
Carbon Dioxide Produced From Gas Wells Used as Refrigerant—By L. P. STOCKMAN 48
Liquefied Gas Used as a Motor Fuel—By W. T. ZIEGENHAIN 51
Technical Abstracts 52
Technical Questions—By C. K. FRANCIS, Ph. D. 53
Problems From Readers—By T. F. SMILEY 54

Markets and Prices

Group 3 Market—By D. H. STORMONT 102
New York Market—By H. STANLEY NORMAN 103
A.P.I. Refinery Report 103
Tank-wagon Markets 104
Refinery Prices 105
Crude Prices 106

Additional Features

Natural Gas News 32
Pipe Line Activity 32
Refinery Expansion 33
Natural Gasoline 33
Do You Remember? 100
Personal Paragraphs 100-101
Record of Oil Securities 107
New and Improved Equipment 108-109
Classified Advertising 110-111
Oil Man's Calendar 112
Index to Advertisers 112

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DON'T WORRY ABOUT HIGH PRESSURE

WHEN YOU USE A BAKER Model F CEMENT RETAINER

...when
...
...30 sacks
pressure 1700# Final pressure 3500#
Was second ball used? State details: No.

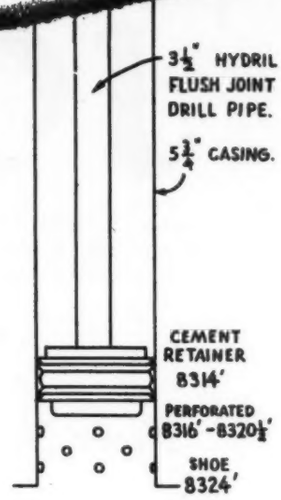
How was cement discharged Squeezed into formation thru perf
Did retainer function properly? State details: Yes

Was customer satisfied with Retainer? State fully: Yes

Can we pass information to others?
CHARACTER OF JOB IN DETAIL We ran Retainer to bottom, pumped down 5 bbl. of clean water, picked up to setting point and set Retainer. Pumped down 10 bbl. more of clear water, closed Jars and broke circulation at 2600#. Leakage occured in Jars so put 8 points of strain on it and it held perfectly thereafter. Pumped in ~~RESULTS~~ 30 sacks of cement, pressure built up rapidly to 3500# at which point we slowly pumped in all but 4 sacks of cement. They were squeezing either through the ~~RESULTS~~ perforations or around the shoe to shut out salt water.

Date July 8, 1936

(*) Report will be held open until all inform... Pertinent information can be ad... formations cemented, etc.
Form ...



FOR SQUEEZE JOBS

THE MODERN WAY OF MEETING CEMENTING PROBLEMS

The Baker Model F Cement Retainer provides a means for recementing, shutting off water zones behind liner or casing, plugging back and for accomplishing many general and specific kinds of repair work—with safety and the assurance that the cement is being placed properly. *Its use as a Casing Bridge Plug has solved many other problems.* We will be glad to send you complete data on its construction, operation and application.

The Baker Model F Cement Retainer allows you to put whatever pressure is necessary on the cement. Note the report above where a pressure of 3500 lbs. per sq. inch was necessary to put the cement away. Twenty-six of the thirty sacks were slowly pumped in under this pressure. In addition to confining this pressure on the pipe to the few feet below the Cement Retainer, the Back Pressure Valve in the Retainer kept the pressure on the cement when the job was finished, without the use of fittings at the surface. MOREOVER — the tubing was pulled and flushed out immediately upon completion of the job.

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BAKER Model F CEMENT RETAINER
and Casing Bridge Plug

Operations Continuing at High Levels

CRUDE oil producers in the United States continue to supply their product at a rate slightly in excess of 3,000,000 barrels daily. With the latest available reports showing continued withdrawals from crude storage it is apparent that refiners are running this current output to their stills and drawing on field and plant storage in some cases to maintain their plant operations. These high operating rates are being maintained despite the recommendations of the Bureau of Mines in regard to actual demand and the evidence which the industry itself has that more gasoline is coming from refineries than is needed for a healthy market situation.

The explanation of continued withdrawals from crude storage in the face of a production in excess of recommendations lies in the fact that refinery purchases have shown little or no drop from the peak period of last month, when the demand for gasoline established new records. There are exceptions, but any declines have been offset by other increases.

A possible change in this situation is indicated in the attitude of several smaller refiners located at scattered points in the main producing areas including California as well as other sections of the country. These refiners who have little or no production of their own and who must depend entirely on their plant operations for profits are complaining that refinery prices have dropped to the point where they are operating at a loss. This has been brought about by price declines in gasoline and other products. Should this condition become serious the larger buyers will be asked to take on whatever crude connections these smaller operators drop. This will furnish a test as to the soundness of the present crude production situation. Some of the larger crude buyers admit they have slightly more crude at some points than they need and new contracts have been entered into to increase outlets. Those in close touch with conditions state that these contracts have been made in line with the present posted schedules plus the usual pipe line tariffs and gathering charges. The tanker market at the Gulf Coast on crude continues firm.

Production 3,018,739

Increase 4,335

At a meeting of the Texas Railroad Commission last week discussion of well spacing and other problems which have to do with the long range outlook on proration was postponed. There is strong support in the Lone Star state for a revision in policy which will tend to reduce the present emphasis placed on number of wells in allowables. Except for the continued weakness in tankcar gasoline prices in several areas there was little change in refinery quotations. Residual fuels of low cold test are generally strong, but scattered weakness is apparent in quotations of distillate and kerosene.

Daily Average Production for Week

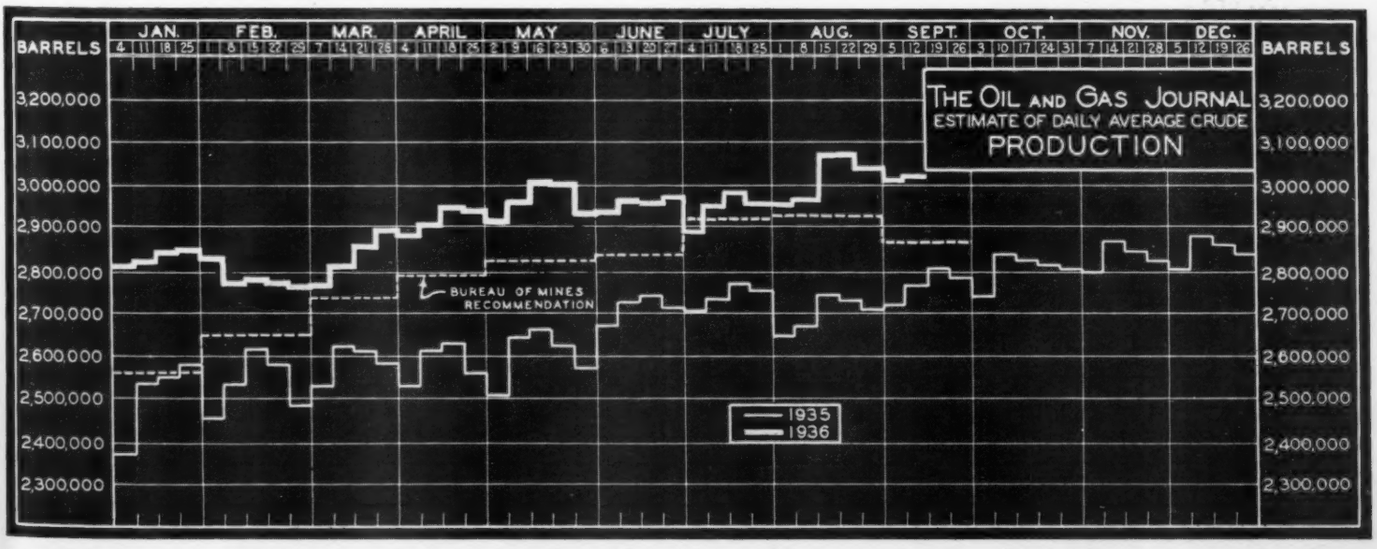
	Sept. 12 1936	Bur.Mines Sept. est.	Sept.State allowables	Sept. 5, 1936
Oklahoma City	136,250			142,225
Seminole-St. Louis	97,375			93,250
Remainder of State	331,825			323,275
Total Oklahoma	565,450	563,000	563,000	558,750
East Texas	439,598			444,498
West Texas	171,897			179,965
North Central Texas	88,684			85,678
Texas Panhandle	56,297			62,785
East Central Texas	59,946			59,125
Gulf Coast—Texas	253,349			258,886
Southwest Texas	88,543			86,457
Total State of Texas	1,158,314	1,123,900	1,125,674	1,177,394
North Louisiana	81,280			82,925
Gulf Coast—Louisiana	154,600			153,894
Total Louisiana	235,880	186,200	235,200	236,819
Santa Fe Springs	45,500			43,250
Long Beach	66,400			66,000
Kettleman Hills	76,750			80,250
Remainder of State	398,350			380,750
Total California	587,000	535,200	*544,000	570,250
Kansas	162,850	160,000	160,000	156,500
Arkansas	28,145	30,500		28,185
Eastern fields	112,250	107,100		112,500
Michigan	31,100	31,300		31,466
Southeastern New Mexico	75,900	70,500	75,405	77,350
Rocky Mountain Area	61,850	56,300		65,190
Total United States	3,018,739	2,864,000		3,014,404

*Recommendation of Central Committee of California Oil Producers.

Crude Oil Stocks in United States

(BUREAU OF MINES ESTIMATE)

Week ending August 29, 1936	301,786,000
Week ending August 22, 1936	303,108,000
Week ending August 31, 1935	324,966,000



SPARKS FROM THE NEWS

Disturbance

Just when Oklahoma operations appear headed for a quiet period two companies bring in record producer with a rating of 64,680 barrels daily.

Then What?

Texas plan to project crude requirements through March will enable producers to know immediately what their minimum market will be during winter months.

No Chance

A real joker in the Robinson-Patman act would be a provision that limited the distribution of congressional speeches.

Stealing the "Spot"

With oil burners, tractors and diesel engines competing for one fraction of crude some of the market limelight may be taken from gasoline.

Come on In

If they have absorbed all the information required of royalty dealers, members of the S.E.C. might resign and enter the oil business.

Tax Competition

Gasoline taxes and registration fees average nearly $50 per car. Based on tankcar prices this is considerably more than refiners obtained from average motorist.

Slipshod Slants

The misinterpretation of statements at the World Power Conference regarding exhaustion of oil supplies suggests need of voluntary censorship by oil men on this subject.

Political Plant

Projected refinery construction in Venezuela reflects nationalistic political trend rather than need for additional capacity in that part of the world.

Reminiscence

Threats by Louisiana's Governor Leche to use national guard in enforcing gas conservation is reminiscent of Governor Murray in early days of Oklahoma proration.

Record

The importance of Rodessa field is indicated in that it required more than year of drilling to find first dry hole.

Forecast

If drought conditions continue in Mid-Continent a water well will rank in importance with an oil well in a new field discovery.

Modern Miracle

Sales of liquefied gas last year totaled 76,855,000 gallons. These gases, formerly wasted, were literally taken from the air.

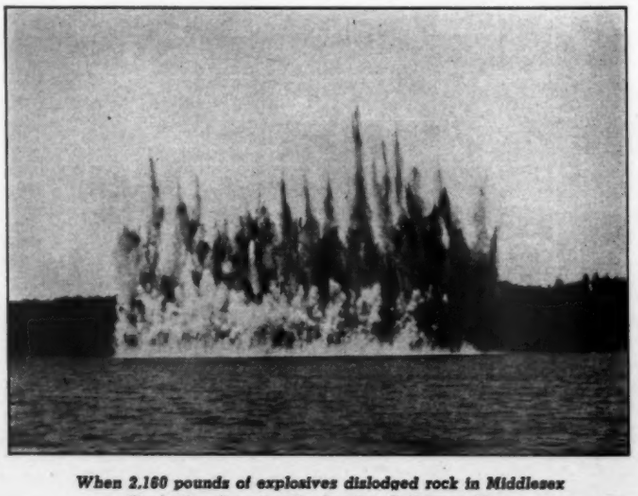
Silly Season

Coal association suggestion oil industry stop making fuel oil should ban gas and electricity to make the world safe for coal men.

Stampede

Members of the Texas Railroad Commission last week followed precedent and adjourned when someone mentioned well spacing.

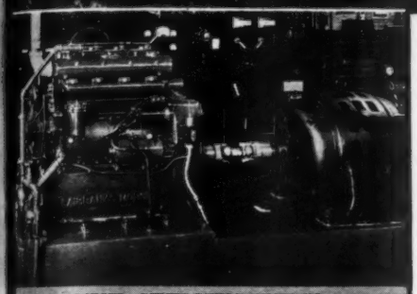
ANOTHER "CROSSING THE DELAWARE"



When 2,160 pounds of explosives dislodged rock in Middlesex (Sun) pipe line trench crossing Delaware River

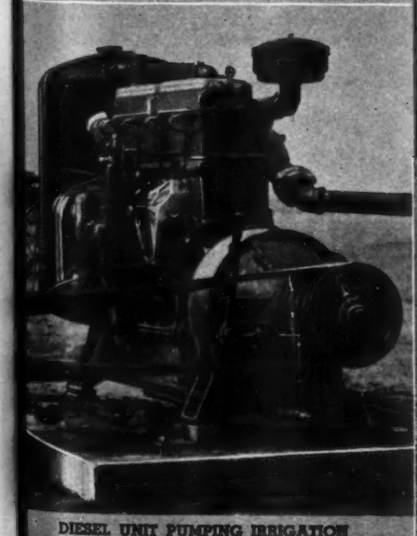
DIESEL FUEL

Demand Assumes Major Proportions as Power Applications Increase



DIESEL GENERATING UNIT IN CALIFORNIA LAUNDRY

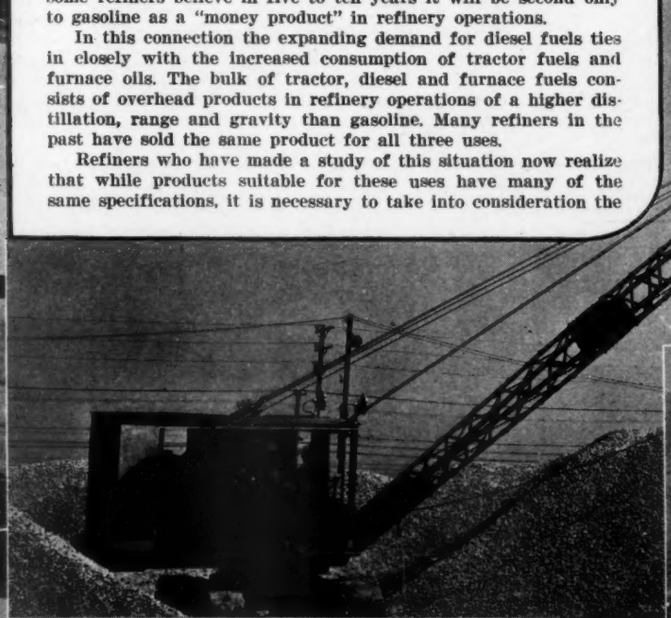
DIESEL TRACTOR USED IN LAND-CLEARING OPERATIONS



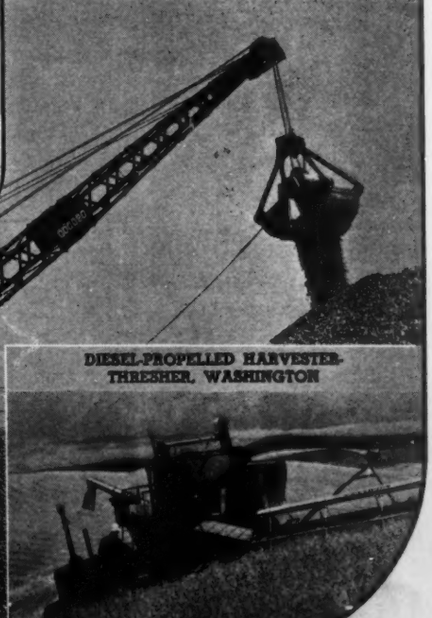
DIESEL UNIT PUMPING IRRIGATION WATER, COLORADO

DIESEL TRACTOR IN LUMBER OPERATIONS, ALABAMA

DIESEL OPERATING SNOW PLOUGH ON IDAHO HIGHWAY



DIESEL CRANE, FLOOD-CONTROL WORK, CALIFORNIA



DIESEL-PROPELLED HARVESTER-THRESHER, WASHINGTON

By T. F. SMILEY

When the oil-burning flying boat Zephir landed at the Pan-American Airways marine base in Port Washington, N. Y., on Thursday, September 10, completing a nonstop flight of 2,390 miles from the Azores, a new peak in diesel accomplishment was attained. The 10-ton Dornier monoplane, manned by four Germans, made the flight in 22 hours and 14 minutes under the sponsorship of the Deutsche Lufthansa, a German corporation, in preparation for a projected regular commercial air service across the Atlantic.

The successful flight of the Zephir follows the early summer crossing of the zeppelin Hindenburg powered with diesel engines. The zeppelin has since been operating on a regular schedule between Germany and the United States.

Not only was this the first flight from the Azores to the United States, but it was the first time a plane powered by diesel engines has flown the North Atlantic. Adding a fresh triumph to those already registered by the diesel and bearing prophecy of triumphs still to come, it recalls how in 1913 Dr. Rudolph Diesel, unseen by other passengers, dropped off a boat to his death in the English Channel, a defeated, disheartened man, because the engine which bore his name was apparently a commercial failure.

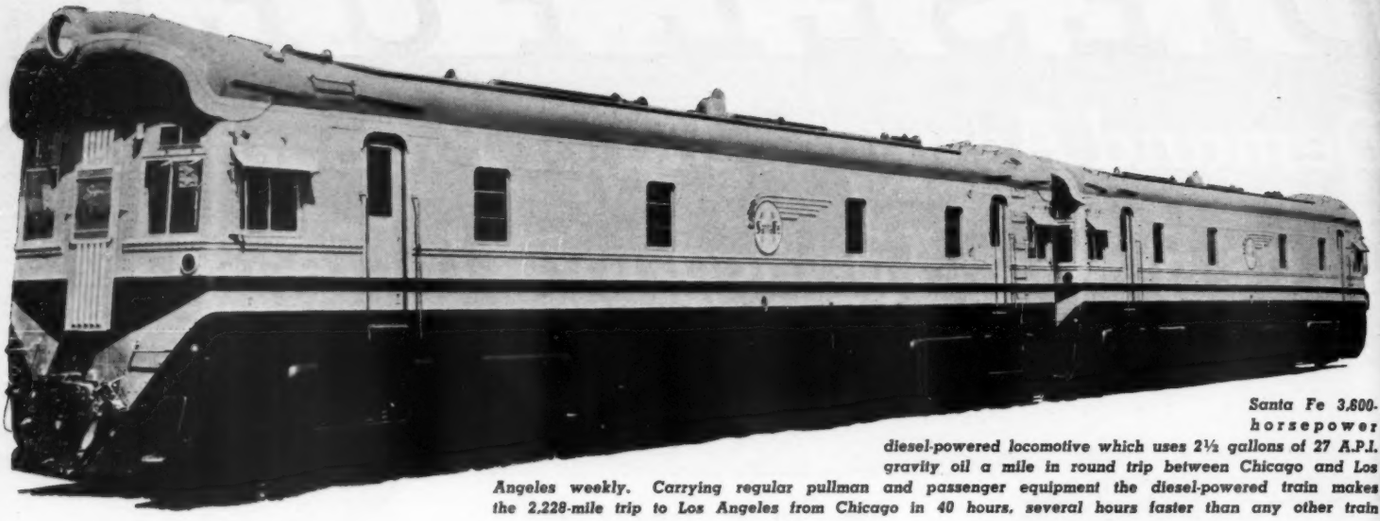
If the German inventor were alive today he would see rapidly multiplying uses for his engine, with a prospective demand for thousands of diesel-trained men. He would see it moving streamlined, comfort-filled railroad trains across the continent. He would see it occupying an important place in oil refinery sales programs; a subject of intensive study, research and experiment and offering a promising career for the young automotive engineer. He would see manufacturing plants rushed with work on diesel engines, most of them employing night shifts and carrying more unfilled orders than ever before in their history.

CEASING TO BE BY-PRODUCT

Meanwhile it is becoming more and more apparent that diesel fuel is rapidly ceasing to be a by-product in petroleum refining and marketing as it was for many years. The volume of diesel sales is increasing steadily in practically all refining areas and some refiners believe in five to ten years it will be second only to gasoline as a "money product" in refinery operations.

In this connection the expanding demand for diesel fuels ties in closely with the increased consumption of tractor fuels and furnace oils. The bulk of tractor, diesel and furnace fuels consists of overhead products in refinery operations of a higher distillation, range and gravity than gasoline. Many refiners in the past have sold the same product for all three uses.

Refiners who have made a study of this situation now realize that while products suitable for these uses have many of the same specifications, it is necessary to take into consideration the



Santa Fe 3,600-horsepower diesel-powered locomotive which uses 2½ gallons of 27 A.P.I. gravity oil a mile in round trip between Chicago and Los Angeles weekly. Carrying regular pullman and passenger equipment the diesel-powered train makes the 2,228-mile trip to Los Angeles from Chicago in 40 hours, several hours faster than any other train

special requirements of each market if satisfactory service is to be given to customers. For instance, in the case of diesel fuel there is an erroneous belief that diesel engines will operate satisfactorily with practically any fraction of crude oil except gasoline. While diesel engines are being operated with fuels that range from kerosene to residual fuel oils, even the unrefined crude itself, it is now known that the best results are obtained when fuels are made especially for the wide variations in engine design. The heavy stationary engines can use heavy fuels, but in the smaller engines such as those in small boats, airplanes, and truck and bus engines, lighter fuels are necessary.

Some of the larger oil companies, in cooperation with the diesel manufacturers and the American Society of Testing Materials, are making a study of the fuels required for the various types of diesel operations. The newer specifications take into consideration the variations in the hydrocarbon properties of the oils as well as the purely physical tests. It seems reasonable to conclude that in a short time the specifications in diesel fuels will be as clear-cut as those for gasoline.

There has been haziness as to just what part gasoline eventually would play in transportation and power and what part the cheaper overhead distillates, suitable for diesel fuel, would play in these same fields; and although this haziness has not yet disappeared entirely, engineering opinion is becoming more settled on that point. Some enthusiastic friends of the diesel have envisaged a day when gasoline would fill a relatively minor role. That view is not shared, however, by conservative men in the industries affected.

Certain difficulties encountered in some uses of the diesel engine have to do with design, and some of them probably will be overcome; but the fact remains that in the end economic considerations will fix the respective parts which gasoline and fuel oil are to play in internal-combustion engines. The diesel, according to diesel engineers themselves, seems likely to find its highest usefulness largely confined, for an indefinite length of time, to heavy-duty tasks. So remarkably has the diesel adapted itself to new uses and pushed its way into unthought-of areas, however, that no man at this time can draw a line and say, "Here the diesel will stop."

Refueling the Hindenburg at Lakehurst

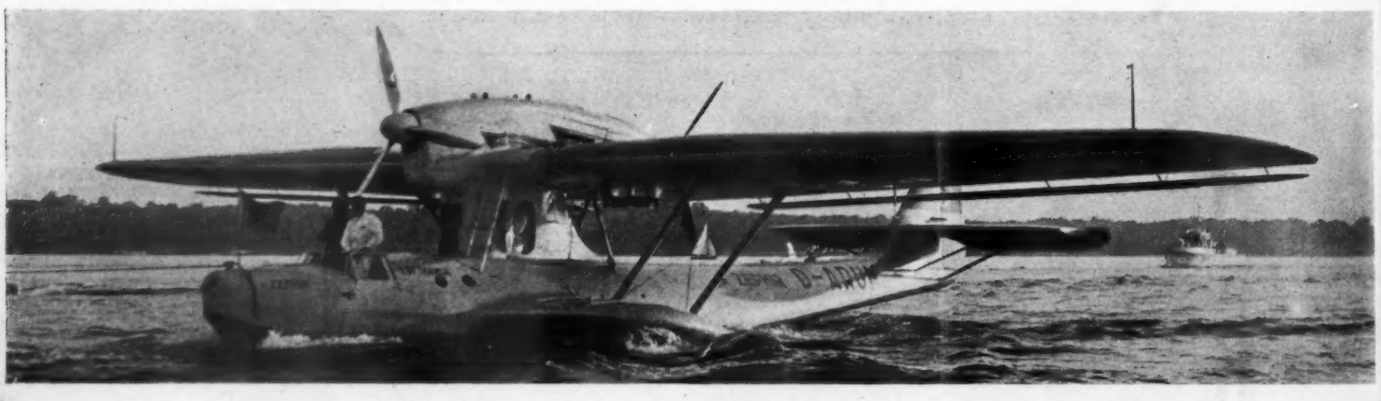
There remain now few industrial activities which have not been invaded by the diesel. First there comes to mind the oil industry, in which a multitude of tasks have been allotted to it. It drills wells and pumps them, runs and pulls tubing, skids rigs, pumps crude and its products through pipe lines, propels tankers and performs an endless list of minor jobs. It might be called the supreme power plant of the sea, with 54 per cent of world shipping dieselized. Giant diesels are installed in electric light and power plants and water works in every part of the United States. Automotive engineers are devoting themselves to development of higher-speed fuel-oil engines for buses, trucks and tractors. The diesel engine has become a familiar sight in modern farm operations. Highway and other great construction projects are calling for hundreds of diesels. There are the paper-making industry, mining, ice-making, cotton-ginning, flour-milling, laundries, lumber, dredging—one could go on and on.

One of the most interesting adventures of the diesel is seen in its adoption this year by the Royal American Shows, which has winter quarters in Tampa, Fla., and, like the big circuses, makes a tour each summer and fall. The owners, who in 1935 paid $40,000 for electric current, are now providing needed light and power with seven 125-horsepower diesel engines, which are expected to pay for themselves in a few years through savings effected.

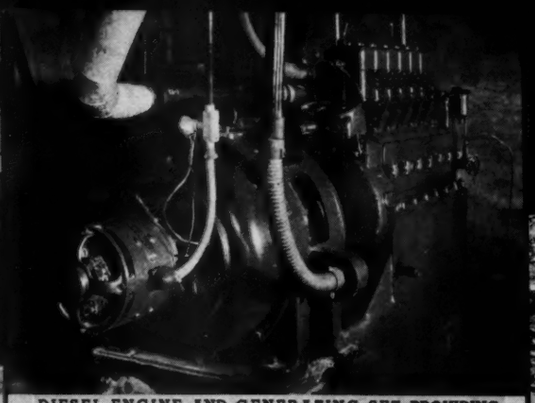
Purchases of diesels in 1935 exceeded the 1934 record by about 60 per cent and topped the boom year of 1928 by 170 per cent. The diesel sales last year totaled 1,201,123 horsepower. Sales so far this year exceed those of 1935. The significance of these figures appears when it is noted that the total diesel horsepower installed from 1898 to and including 1928 was 2,260,000. The first diesel engine

(Continued on Page 99)

When the diesel-powered Zephir took to the water at the end of its epochal flight from the Azores



FORTY-THREE-TON LOAD OF CONCRETE PIPE BEING HAULED BY A DIESEL-MOTORED TRUCK, CALIFORNIA



DIESEL ENGINE AND GENERATING SET PROVIDING ECONOMICAL POWER SOURCE FOR AN OHIO FEED MILL

DIESEL TRACTOR SKIDDING LOGS ON LUMBER OPERATIONS NEAR THE TOWN OF ENUMCLAW, WASHINGTON

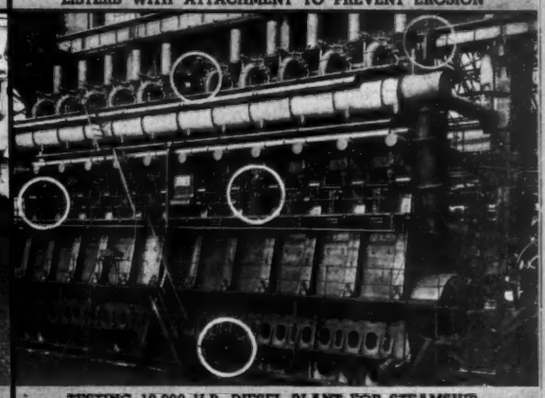
TTING OUT RAILROAD TIES WITH DIESEL UNIT ON STERN SLOPE OF CASCADE MOUNTAINS, WASHINGTON

DIESEL-POWERED ROAD ROLLER OPERATES ECONOMICALLY IN HIGHWAY CONSTRUCTION WORK, IN PORTO RICO

WIDE-GAUGE DIESEL TRACTOR, KANSAS, PULLING LISTERS WITH ATTACHMENT TO PREVENT EROSION

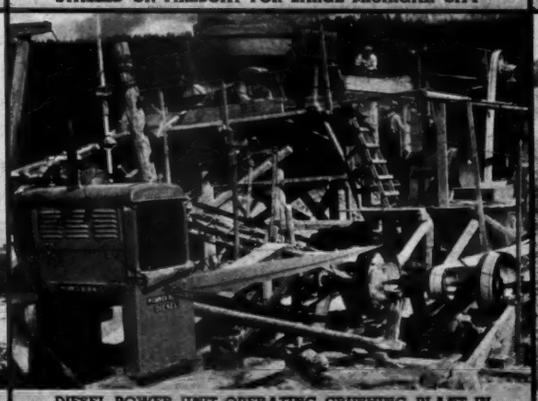
DIESEL-POWERED TRACTOR PULLING DITCHER IN HIGHWAY CONSTRUCTION WORK ON PACIFIC COAST

BATTERY OF THREE DIESEL PUMPING ENGINES INSTALLED ON FIREBOAT FOR LARGE MICHIGAN CITY



TESTING 10,000 H.P. DIESEL PLANT FOR STEAMSHIP "GEORGIC" (NOTE RELATIVE SIZE OF MECHANICS)

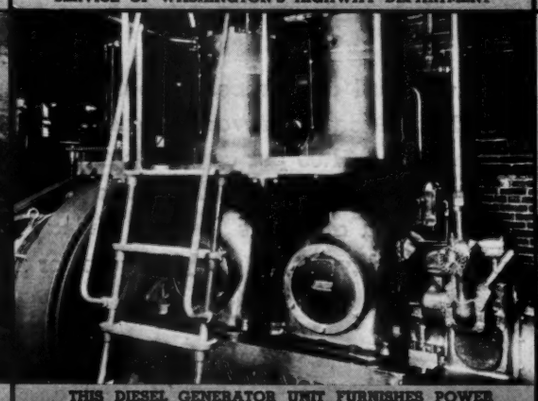
DIESEL DITCHING UNIT AT WORK ON ISLAND IN THE DELTA OF THE SAN JOAQUIN RIVER, CALIFORNIA



DIESEL POWER UNIT OPERATING CRUSHING PLANT IN SERVICE OF WASHINGTON'S HIGHWAY DEPARTMENT

DIESEL-POWERED TRACTOR PULLING GRADER IN USE ON TERRACING WORK FOR RETENTION OF MOISTURE

PULLING FIVE 14-INCH PLOWS WITH DIESEL TRACTOR ON A LARGE FARM IN ONE OF THE PACIFIC STATES



THIS DIESEL GENERATOR UNIT FURNISHES POWER AT LOW COST FOR A WEST VIRGINIA ICE COMPANY

MODERN DIESEL TRUCK HAULING 21,000 POUNDS OF WELL CASING OUT OF A CORNFIELD IN OKLAHOMA

Organization of Oil Industry Is Closely Regulated Abroad

By E. B. SWANSON
Associate Director for Production, Federal Petroleum Administration

Eleven papers, descriptive of the organization of the petroleum industry in Argentina, Austria, Canada, China, France, Germany, Great Britain, Hungary, Poland and the United States, were submitted for consideration at the World Power Conference during the recent session in Washington.

Mr. Jules Meny, in his paper on the organization of the French petroleum industry, traced the post-war enactment of laws and decrees whereby the government was assured that importing companies, in connection with licenses to import, would maintain an ample reserve of petroleum products within the country and ultimately would construct and operate refineries capable of meeting the larger share of the local demand. In 1931, when the last of these decrees was promulgated, there were three refineries in France, according to Mr. Meny, capable of treating 330,000 tons of petroleum annually. By 1935, 12 additional refineries were constructed and the three existing refineries were enlarged, with the result that the French refining industry during 1935 was capable of processing 6,000,000 tons of petroleum and supplying through these manufacturing facilities 95 per cent of the kerosene, or illuminating oil; 75 per cent of the gasoline or motor fuel; 60 per cent of the lubricating oils; 70 per cent of the gas oil; and 90 per cent of the heavier road or fuel oils required in the country. More than 70 per cent of the total 1935 production in Iraq was refined in France, this quantity being equal to approximately 40 per cent of the French refining capacity.

Prof. Dr. A. Bentz, assisted by Doctor Kast and Dir. H. Brockhaus, described for Germany an industrial organization operating under state regulation and affected directly by domestic and foreign trade policies resulting from the national need for limiting the demand for foreign currency. With the increasing economic importance of petroleum, the right to explore for petroleum or confer such right upon others has been transferred gradually from the landowner to the state. Governmental loans have been made available to assist in financing exploratory drilling, the loans being repaid in the event of discovery.

The German custom policy has not striven to foster a local refining industry by establishing lower duties on crude oil than on products, but a refining industry capable of processing approximately 800,000 tons annually, or about one-third of the local demand, has been developed. The tariff policy, however, tends to establish prices for products, the duties comprising such a proportion of the selling price that fluctuations in the world markets are of minor importance. The prices of petroleum products, as of all goods, are subject to certain supervision by the state. The government, by decree, also has regulated the establishment of additional service-station outlets. Utilization of regenerated used lubricating oils, the required mixture of certain portions of alcohol, and the use of solid and gaseous substitute motor fuels is promoted.

By the Petroleum Act of 1934, according to the paper prepared by the Petroleum Department and the British National Committee of the World Power Conference, the property in any oil which may exist in Great Britain was vested in the Crown and conditions prescribed for granting licenses to search for oil. Production rights may be acquired over an area 100 square miles or more under a single license. The government, as owner of the oil, retains a certain measure of control in order to ensure proper and orderly development. Under the act, it is stated, 39 licenses for exploration and drilling, covering an area of more than 7,000 square miles, have been granted.

The home production of alternative motor fuels, derived principally from shale and coal, becomes profitable and is encouraged by the fact that home-produced oil products and substitutes are exempt from the taxation (8d. per imperial gallon since September, 1931) imposed on imported petroleum products and products obtained from imported crude. Despite this incentive, the home production of substitutes amounts to only 4.7 per cent of the total consumption. No special incentive has been given to the refining of petroleum in the United Kingdom and the products obtained from imported crude are taxed on the same scale as imported refined products. By the British Hydrocarbon Oil Production Act of 1934, a protection of 4d. per gallon was guaranteed to petroleum products or substitutes produced in the United Kingdom entirely from indigenous sources for nine years from April 1, 1935, or a higher duty for a correspondingly shorter period.

In Poland, according to Dr. Stanislaw Schaetzel, landowners may either develop potential oil-producing properties themselves or cede their rights to others, but the royalty oil accruing to the landowner is commandeered in return for an equivalent value in cash by the state mineral oil refinery, a practice which originated during the World War and has since continued. The elimination from the general market of the crude oil from these individual sources has contributed to the maintenance of crude oil prices at a more or less uniform level.

Although the Polish refining industry had for a number of years been grouped in combines, a compulsory commercial organization embracing the entire industry was formed on the basis of a law enacted in 1932 and amended early in 1936. Under regulations issued by the minister of industry and commerce, quotas for the sale of oil products in the home market and for export are allocated to the individual refineries.

In Argentina, according to Guillermo Hileman, chief of Mineral Service, mineral rights, except for existing concessions, belong to the state and, except for four of the northern provinces, no new petroleum concessions have been granted since 1924.

Next Week

(SEPTEMBER 24)

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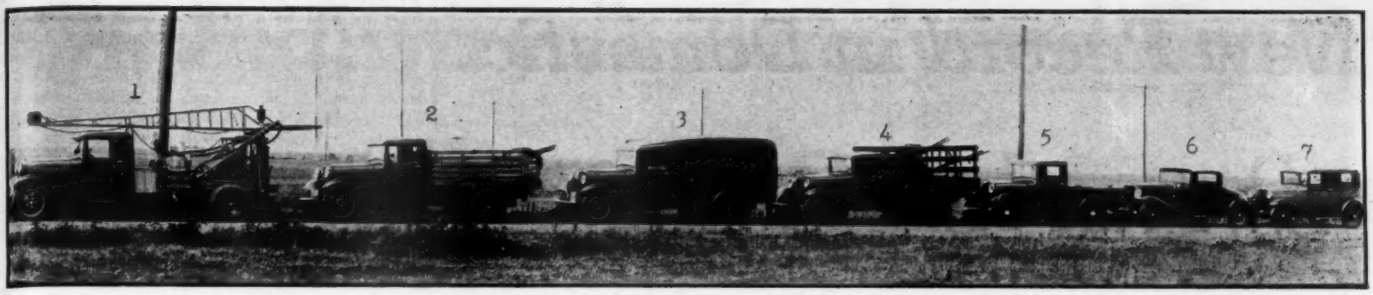


Motor equipment for geophysical crew: (1) Drilling rig; (2) rig water truck; (3) instrument truck; (4) shooter's water truck; (5) shooter's car; (6) party chief's car; (7) surveyor's car

260 Geophysical Crews Active in Field Exploration Work

By NEIL WILLIAMS

HOUSTON, Tex., Sept. 14.—With the steady increase in the number of crews at work, more geophysical exploration is under way than at any time since it was started. Although the number varies each day as companies shift their operations from place to place, according to a late survey there are more than 260 crews active at this time, an increase of between 50 and 60 within six months.

No immediate let-up is in sight. There has been some slackening of work on the Gulf Coast, but the use of geophysics is spreading to other areas. Despite the decline in number of crews working on the Gulf Coast, from between 100 and 110 six months ago to 83 at present, this district continues to lead in the amount of work. Many of the crews have been shifted to northeastern Texas, northwestern Louisiana and southern Arkansas, where development of the Talco and Rodessa fields has directed interest to the possibility of locating additional structures of those types.

Considering the limited areas involved in the Talco and Rodessa fault-line plays, there possibly is a greater concentration of geophysical activity in these areas than in any other place. However, Oklahoma and Kansas have been coming in for their share of the work, and since the first of the year California has been proving an attractive hunting ground for geophysicists.

In the recent check of geophysical work, the crews were shown to be distributed as follows:

Texas Gulf Coast*	50
Louisiana Gulf Coast	33
Total	83
North Louisiana-Arkansas-Northeast Texas	27
Oklahoma-Kansas	50
California	27
Wyoming	6
Illinois	7
Total	260

*Includes Lower Gulf Coast and few crews in Southwest Texas.

This check does not show any crews operating in such states as Nebraska, or in New York and other eastern states, in which some geophysical work has been done in recent months.

More than 20 geophysical crews, mostly shooting crews, have been moved into California since the early part of the year. Not more than a half dozen crews were in that state and very little geophysical work had been done, but there now are 27 crews active.

At the present rate of activity, the industry is spending in the neighborhood of $14,000,000 annually on geophysical exploration. This estimate represents only the cost of maintaining the crews in the field and does not include the expenditure for instruments and other equipment. The figure is based on an estimated average cost of between $4,500 and $5,000 per crew monthly. In many instances this cost is much higher.

It is figured that one or two good fields each year repays the costs many times over. With the rate of discovery many times that, the expenditure for geophysics has represented a comparatively small portion of the total cost of field discovery and development.

On the Gulf Coast alone, 15 fields, discoveries directly attributed to geophysics, have been opened this year. Since the introduction of the science to this district, 97 fields, exclusive of those in the Lower Gulf Coast district and Southwest Texas, have been opened as a result of geophysics. In addition, 15 other fields and domes have been found, in the discovery of which geophysics played an important part. Altogether, 154 fields and domes have been found on the Gulf Coast.

In view of the great amount of geophysical work done on the Gulf Coast, there has been a question as to how much more work remained to be done. There are few areas on the Gulf Coast which have not been checked with instruments, and most of the district has been worked and reworked. On the other hand, there has been no cessation in the number of new discoveries.

Each new field found means one less to be discovered. It may be most fields of the present known types have been found, but as drilling and wildcatting keeps up, new types of structures and fields are constantly being found, which keeps the way open for continued geophysical activity. Only when the number of discoveries in proportion to the amount of geophysical work which must be done and the number of areas that must be worked to find these fields or prospects declines to a point that the cost of exploration is not justified will there be any cessation of this work.

However, geophysics is finding a more general application than just for exploration for new fields. Many of the crews, particularly on the Gulf Coast, are being utilized in detailing of new prospects, checking and rechecking areas in which doubtful or puzzling anomalies have been found, and in outlining proven areas. Most companies find it expedient to follow up one type of instrument or one crew with other instruments and crews. This is expected to insure a continuation of work for the geophysicists to augment the new exploration undertaken.

Most of the geophysical exploration now under way is being done by shooting crews. Of the total of 260 crews now active, 210 are using the seismograph. Of the 50 remaining crews, 36 are operating torsion balances and 14 magnetometer, pendulum, gravitometer or one of the various electrical instruments. Reflection shooting is most prevalent among the seismograph crews, although for general reconnaissance in some of the newer areas refraction methods are being followed.

Workers of Baytown Refinery Order Strike Saturday

HOUSTON, Tex., Sept. 14.—Efforts to avert a general strike of union refinery workers at Humble Oil & Refining Co.'s 125,000-bbl. plant at Baytown, Tex., are being made with the arrival in Houston of Joseph Myers, conciliator representative of the United States Department of Labor.

The strike has been called for Saturday, September 19, by Baytown Local No. 133, International Oil Field, Gas Well and Refinery Workers of America, demanding a 10 cents per hour increase for all wage earners and a corresponding increase for salaried employes, imposition of a seniority rule in promotions, and a working agreement between the company and the union.

In calling the strike, authorized in a vote September 10, the union claims the company refused to discuss the demands with union officials. The company maintains its wage scale is liberal, and with men of equal capabilities, it gives preference in promotions to those of long service. It however, refuses to enter into any agreement "the effect of which would require employes to belong to the union."

A statement by H. C. Wiess, executive vice president, declared the company knew of no grounds upon which a strike could be called; that employes had been faring better than men engaged in similar work elsewhere.

Union officials have given assurance the walkout will be carried out gradually so the plant can be shut down without damage. The company will be given ample time to safeguard its property, and every effort will be made to preserve order and protect property.

Union members who voted to call the strike represented, it is claimed, only a comparatively small proportion of the 3,500 refinery workers employed. More than 2,500 employes already have signed a statement expressing their opposition to the strike and desire to continue working.

New Record in Domestic Demand for Gasoline

For the first time domestic demand for motor fuels in the United States in July passed 1,500,000 bbls. daily. With the 76,000 bbls. daily purchases by foreign buyers the total demand for motor fuels in July, according to the latest report of the Bureau of Mines, averaged 1,582,000 bbls. or 66,444,000 gallons daily.

The July domestic demand for motor fuels was 13 per cent greater than in July, 1935, and was slightly greater than in June, which was 17 per cent greater than June of last year. These gains for the two months were 3 to 7 per cent larger than had been expected. The exceptional gains account for the fact that despite the high operating status of refinery runs, stocks of finished and unfinished gasolines were reduced almost 5,000,000 bbls. during July.

To provide the crude oil for these plant operations the industry absorbed all of its current production and drew on storage for a total of 4,656,000 bbls. in July. This reduction in crude stocks was offset by a gain of 4,023,000 bbls. in stocks of fuel and gas oil and 932,000 bbls. in kerosene stocks.

The addition of the July operating data made little change in accumulative figures for the year, as shown in accompanying table, so far as the balance between supply and demand was concerned. For the seven months the domestic outlets for motor fuels were 11.2 per cent over the same period in 1935 and the total demand is 10.5 per cent greater despite a small loss in exports.

With gasoline yields from crude about the same as last year the 11.6 per cent increase in crude runs to stills at refineries is reflected in a large gain in production of fuel oil and gas oil. Fortunately the gain in domestic demand was almost 15 per cent for the seven-month period and the increases in storage so far this year have not been alarming. It is predicted that the fall months will witness a steady withdrawal on stocks of these heavy oils which will continue until the spring of next year. Stocks of kerosene increased at an exceptionally rapid rate in July and the decline in lubricating oil inventories was small considering the fact that the month is one of the largest consuming periods of the year.

With the exception of motor fuels the inventory situation appeared fairly satisfactory based on data as of July 31. The reduction in crude stocks was heavy during the summer months and if continued over the balance of the year will bring the inventories of refinable crude to around 310,000,000 bbls.

Gasoline stocks were admittedly too large on July 31 and are still too high despite the reductions since the end of July as indicated by the weekly A.P.I. reports. The Bureau of Mines points out that stocks of all motor fuels should be reduced about 10,000,000 bbls. under the July 31 figure if the program of reducing stocks on hands to the economic limit by October 1 is attained. Stocks of fuel oil and gas oil on October 1 will apparently be about the same as the year previous with increases in demand assured for the fall and winter months. Stocks of petroleum wax which showed a healthy trend the latter part of 1935 have been less favorable in recent months.

Crude Oil and Refinery Situation Summarized — First Seven Months

Supply and Demand—Crude Oil (Bbls.)

First 7 months—	Total supply	Total demand	Excess Demand	Excess Pct.	Domestic production	Imports	Indicated domestic demand‡	Exports	Stocks refinable crude July 31
1936	646,138,000	654,379,000	8,241,000	1.3	627,989,000	18,149,000	627,300,000	27,079,000	306,390,000
1935	579,592,000	587,495,000	7,903,000	1.3	561,670,000	17,922,000	559,231,000	28,264,000	329,351,000
Increase, 1936	66,546,000	66,884,000			66,319,000	227,000	68,069,000	†1,185,000	†22,961,000
Increase, 1936	11.5%	11.4%			11.8%	1.3%	12.2%	†4.2%	†7.0%

Supply and Demand—Refinery Products—Motor Fuels (Bbls.)

First 7 months—	Total supply	Total demand	Excess Demand	Excess Pct.	Domestic production	Imports	Domestic demand	Exports	Stocks July 31§
1936	290,771,000	283,402,000	*7,369,000	*2.6	290,771,000		267,653,000	15,749,000	68,238,000
1935	261,127,000	256,586,000	*4,541,000	*1.8	261,107,000	20,000	240,767,000	15,819,000	62,262,000
Increase, 1936	29,644,000	26,816,000			29,664,000	†20,000	26,886,000	†70,000	5,976,000
Increase, 1936	11.4%	10.5%			11.4%	†100.0%	11.2%	†0.4%	9.6%
Kerosene									
1936	32,358,000	32,045,000	*313,000	*1.0	32,357,000	1,000	28,495,000	3,550,000	8,228,000
1935	32,445,000	29,674,000	*2,771,000	*9.3	32,445,000		25,804,000	3,870,000	9,169,000
Increase, 1936	†87,000	2,371,000			†88,000	1,000	2,691,000	†320,000	†941,000
Increase, 1936	†0.3%	8.0%			†0.3%		10.4%	†8.3%	†10.3%
Gas Oil and Fuel Oil									
1936	255,020,000	250,283,000	*4,737,000	*1.9	244,656,000	10,364,000	230,660,000	19,623,000	108,721,000
1935	216,534,000	218,609,000	2,075,000	0.9	203,968,000	12,566,000	204,279,000	14,330,000	108,322,000
Increase, 1936	38,486,000	31,674,000			40,688,000	†2,202,000	26,381,000	5,293,000	399,000
Increase, 1936	17.8%	14.5%			19.9%	†17.5%	12.9%	36.9%	0.4%
Lubricating Oils									
1936	17,620,000	18,025,000	405,000	2.2	17,618,000	2,000	13,096,000	4,929,000	6,620,000
1935	15,615,000	16,429,000	814,000	5.0	15,615,000		11,405,000	5,024,000	6,517,000
Increase, 1936	2,005,000	1,596,000			2,003,000	2,000	1,691,000	†95,000	103,000
Increase, 1936	12.8%	9.7%			12.8%		14.8%	†1.9%	1.6%
Petroleum Wax (Lbs.)									
1936	285,752,000	282,060,000	*3,692,000	*1.3	276,640,000	9,112,000	178,368,000	103,692,000	118,367,000
1935	272,908,000	270,103,000	*2,805,000	*1.0	257,600,000	15,308,000	148,468,000	121,635,000	138,941,000
Increase, 1936	12,844,000	11,957,000			19,040,000	†6,196,000	29,900,000	†17,943,000	†20,574,000
Increase, 1936	4.7%	4.4%			7.4%	†40.5%	20.1%	†14.8%	†14.8%

*Excess supply. †Decrease. Note—Total supply equals domestic production plus imports. Total demand equals domestic demand plus exports. Data on demand for refined products are based on refinery shipments. ‡Crude oil only. §Includes finished, unfinished refinery gasoline and natural gasoline.

Crude Oil Runs to Stills and Total All Oils (Bbls.)

First 7 months—	Total imports§	Total exports§	Total crude to stills	Per cent yield gasoline‡	Nat. gasoline production	Total supply all oils*	Total demand all oils*	Stocks all oils July 31
1936	31,929,000	72,350,000	608,479,000	46.4	23,339,000	684,655,000	680,910,000	545,445,000
1935	30,772,000	68,962,000	545,008,000	46.7	21,766,000	615,220,000	613,356,000	566,012,000
Increase, 1936	1,157,000	3,388,000	63,471,000		1,573,000	69,435,000	67,554,000	†20,567,000
Increase, 1936	3.8%	4.9%	11.6%		7.2%	11.3%	11.0%	†3.6%

*Total all oils includes crude refined products, natural gasoline and benzol. †Decrease. §Includes crude oil and refinery products. In case of imports includes receipts in bond and for domestic use. All data based on Bureau of Mines reports. ‡Includes natural gasoline blended at refineries.

Oil Industry Is Analyzed From Standpoint of the Investor

By JOHN D. JAMESON
Clarke, Sinsabaugh & Co., Inc.*

One of the most important aspects of the failure to be predictable of which we accuse the oil industry is its tendency to overmarket. By overmarketing in this sense, I mean pressing for sale, more or less regardless of price, products in excess of those needed at the moment. It seems to us that this is a more apt description of one basic cause for uncertainty which we find in the industry than to call it overproduction since it is inevitable and beyond human control that the supplies of crude oil stored below the earth's surface will be found and frequently that they will be produced in unequal amounts for any given period of time. It is more realistic to concern ourselves not with overproduction in general but with its aftermath—overmarketing. There is no reason for anyone to assume that the demand for petroleum products should parallel the production of crude petroleum. We know why it would be convenient for the industry if it did, but we have not found very convincing the explanations as to why the industry continues to act as if it did. It would seem that the self-interest of all concerned should be able to surmount even the difficulty of divergent interest as between large and small operators and as between private, state, and federal jurisdictions. We hope eventually we may find that an unusual accumulation of inventories is not usually a warning of unpredictably lower prices for it is at present very difficult to prevent inventory accumulation in the face of new large discoveries of crude oil. In any case, the overmarketing of petroleum products to retail outlets tends to have a sharp effect upon prices throughout the industry without very much effect in stimulating the volume of business transacted. Therein lies a major reason for our inability now and in the future to predict the course of profits in the oil industry where margins of profit are so small in absolute dollar amount that even slight changes in price are a cause of sharp changes in profits.

A "HIGH SPEED" INDUSTRY

One of my friends once described the essence of the matter by calling the oil business a high-speed industry. In other words, in the oil industry the time which usually elapses between the discovery of a new source of crude oil and the appearance upon the markets of products refined from its production is very short relative to the similar interval in many other extractive industries.

Fully as important, of course, is the highly developed technical skill and the energy of those who man the exploration, drilling and production crews. From our point of view, the result of all this is that the effect of a sudden increase in the available supplies of crude petroleum follows so soon upon the heels of the discovery that the remainder of the industry has little opportunity to take those cooperative steps which today are the chief defense of the price structure. Though they constitute the substance upon which the industry grows as in the case of other extractive industries large new discoveries, by their effect upon price tend to diminish the value of capital already invested and sometimes more sharply to diminish the earning power which that capital can expect. Stated in the investor's language, it means that the outlook for earnings and consequently for oil security values must be uncertain as long as the possibility of new large discoveries exists. The investor's dilemma is clear since he would certainly avoid oil shares in general if no new discoveries were possible.

MARKETING

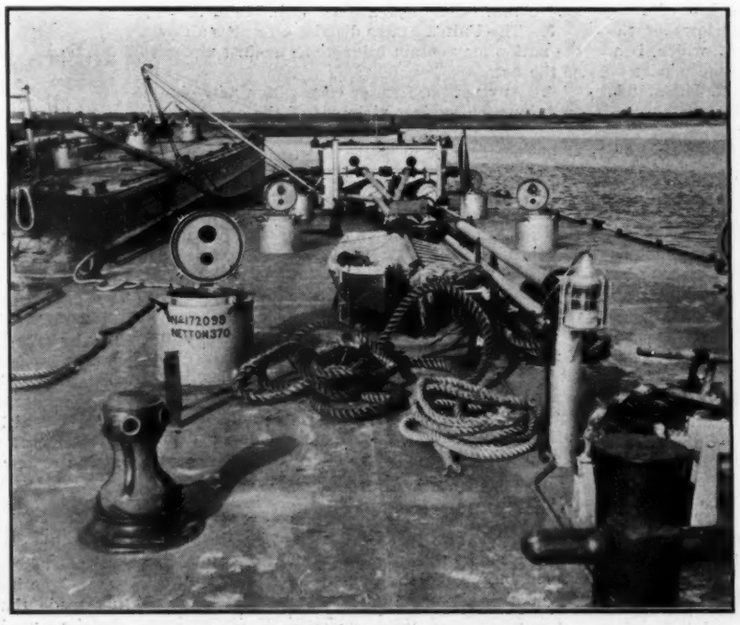
More difficult perhaps, from our point of view, is the situation in the retail marketing field. While I am not a technician in the involved matters of marketing and distribution, it seems to me that we are today witnessing the completion of a cycle which began not much more than 10 or 12 years ago. Then, oil companies, confronted with the tremendously growing demand for gasoline, found themselves required to establish command of the retail channels of distribution as a means of protecting their investment in refineries and producing fields, and further, as a means of establishing, through brand advertising, public consciousness of the separate identity of the products of each respective company. At tremendous cost, the industry set out to accomplish this objective by acquiring physical possession of retail outlets. The process, as continued almost up to the present time, has subjected some of the companies less fortunate than others to great financial strain; has had an almost permanent effect upon some capital structures; and has been the source of handsome losses. In general, the oil companies which have most constantly and intelligently developed retail distributing systems have accomplished at least the objective of establishing consumer acceptance for their brands; of raising the level of service offered car owners and of providing a channel through which their refined products might flow into consumption. To this extent, the venture has probably been successful. During its progress, however, it has been a constant source of doubt to investors because there was no method by which it could be determined how large a loss would be incurred before the venture was either abandoned or successful. And today we are faced with a new and additional hazard which completes the cycle in that, increasingly, the major oil companies are undoing what they did 10 to 12 years ago in a movement popularly known as the Iowa Plan.

The expansion of marketing organizations was, at its peak, a rather frantic affair. We have been told of one company that three times bought out the same dealer business from the same man at intervals of five years. At the end of each of his enforced vacations he reestablished his old business through his personal acquaintance with the field and territory. The major company did or could do little to prevent it. Also, and quite generally, the cost of desirable sites was overlooked; the idea was to get the site and worry about the cost later. As a result, too many were acquired and at excessive cost. Similarly, the development of palatial stations—offering a wide range of services, attractive but frequently not related in any way to the oil business—added to the expense of the undertaking. In a sense, the oil companies built their marketing systems in the same rapid and enthusiastic fashion with which they used to build a new oil field and the boom town that accompanied it.

IOWA PLAN

Such uncertainties as the investor found in his study of the oil industry by reason of this development of marketing systems will probably disappear gradually as the Iowa Plan or others with the same intent are carried out. Of course, the investor wonders what kind of write-offs will be necessary at the end of the year in which a company sells many of its filling stations back to the operators or to others. Also, where the station is leased, the wonder concerns the relationship between the rental and the annual carrying charges plus upkeep. Once the job of retailing is entirely back in the hands of individuals, if that is to be the outcome of the present trend, a separate problem may result for us in that private filling stations may for a period interfere with the normal expression of consumer preference for already established brand names. We must wait for further evidence before we conclude that there is or is not an uncertainty brewing in this re-

OKLAHOMA CRUDE ARRIVES IN MICHIGAN



An oceangoing tug and two all-steel barges arrived at Muskegon, Mich., last week with 11,300 bbls. of Oklahoma crude loaded at Empire Oil & Refining Co. wharf in East Chicago for Old Dutch Refining Co., Muskegon

*Extracts from paper at annual meeting, National Petroleum Association, Atlantic City, September 17.

spect. Looking at the whole development more broadly, however, it must be admitted that the investor seldom finds in any industry a complete cycle of change affecting the basic theory of distribution occurring within a period of 15 years. Such rapid, even though probably necessary, changes tend to accentuate his belief that the oil industry is more unpredictable than many others.

MAJORS AND INDEPENDENTS

The so-called integrated company exists primarily because it is only when a very substantial proportion of the derivatives of petroleum moves from well to service station through a channel under single corporate control that the speed of movement required by the low level of inventories to which the industry has become accustomed can be accomplished. It seems unlikely that oil could be moved as expeditiously from well to service station without greatly increased inventories all along the line if there were no relation other than that of buyer and seller between the operating units in the industry's various divisions. In this sense the integrated company is a necessity. As is usual, however, companies which exist under what we might call a certificate of economic necessity, have also great responsibility on the one hand and an opportunity for abuse on the other.

Partly because the integrated companies cannot entirely serve the available market satisfactorily, and partly because of abuses they allow to creep into their operations, there is a very necessary place for the smaller company whose activities are confined to one division alone. As between the two, it is probably inevitable that there be points of friction and many occasions for misunderstanding and suspicion. These are obviously as much a concern to the oil industry as to the investor. But in the light of what we have said about the investor's requirements, it is obvious that this everpresent source of potential conflict must cause him to wish that the industry would find a solution either in another form of organization or in an increasingly fine spirit of cooperation. I say this realizing that the condition described is a function of that basic competition from which no industry is or probably should be free. Could a practical solution be found, the investor would feel that chances were greatly reduced for a repetition of such events as the introduction into Congress of bills like the Thomas-Disney Bill which was calculated to reduce the oil industry almost to the status of a regulated public utility.

The progress made by the industry in establishing some degree of cooperative production control, and in accepting proration; the active search for an acceptable code of fair trade practices; the Interstate Compact Commission, all indicate a greater willingness to meet its own problems face-to-face than the investor would have found a few years ago. It is even not too much to hope that sometimes a basic and universal solution may be found for the "law of capture" problem and for its corollaries. Yet in view of the information available and the uncertainties surrounding the industry, the investor must use particuar care in selecting oil securities for his portfolio. One may ask why he bothers with an industry where the risks are so unpredictable. The answer is clear from the record. Large fortunes have been made from oil and will be again. And in contrast with the reputation for instability of operations gained by the industry at large, some of the outstandingly well-managed companies, both large and small, have established a record for continuous profits which might well be envied by other industries.

Patman Law Explained Before N.P.A. Meeting

By WRIGHT PATMAN

Member of Congress*

The Robinson-Patman law is an amendment to the Clayton antitrust law of 1914, and is now a part of the antitrust laws of the nation, except section 3 of the law, which is a criminal provision and does not become a part of the Clayton Act or the Sherman Act, but stands upon its own bottom.

In substance, this law provides:

(a) That it shall be unlawful for any person engaged in commerce to discriminate in price or terms of sale between purchasers of commodities of like grade and quality.

(b) That the payment of brokerage or commission under certain conditions shall be prohibited; that a brokerage fee shall not be used as a bribe.

(c) That pseudo advertising allowances shall be suppressed.

(d) That a presumptive measure of damages shall be provided for.

(e) That the Federal Trade Commission may, after due investigation and hearing to all interested parties, fix and establish quantity limits, and revise the same as it finds necessary, as to particular commodities or classes of commodities, where it finds that available purchasers in greater quantities are so few as to render differentials on account thereof unjustly discriminatory or promotive of monopoly in any line of commerce.

Permit me to invite your attention to the many different ways that this law may be enforced:

1. The Federal Trade Commission may issue a cease-and-desist order, which, if violated, will permit punishment to be inflicted.

2. The department of justice in Washington may obtain injunctions against violators of the act.

3. The United States district attorneys all over the nation may obtain injunctions against violators of the act.

4. Any person, firm or corporation may obtain an injunction against violators of the act.

5. Any person or corporation who is injured in his business or property by reason of violation of the act may sue for three-fold damages and costs of suit, including a reasonable attorney's fee.

The period within which, following unlawful discrimination, anyone injured by discrimination may bring suit for three-fold damages varies according to the statutes of limitations that prevail in the different states. In most states it is six years, in a few it is five or less, but in others it is even 7 and 10 years. In a five-year statute of limitations state, any purchaser, who, since this act became effective on June 19, 1936, is now being injured because some benefit is being withheld from him that he is entitled to under the act may wait until the end of July, 1941, and then institute suit for three-fold damages and attorney's fees, as provided by section 4 of the Clayton Act.

The injured person may sue a corporation not only in a judicial district whereof it is an inhabitant, but also in any district wherein it may be found or transacts business, and a suit may be brought in any District Court of the United States without respect to the amount in controversy.

Furthermore, a final judgment or decree rendered in any criminal prosecution or injunction case on behalf of the United States under the antitrust laws, to the effect that a defendant has violated certain laws, shall be prima facie evidence against such defendant in any suit or proceeding brought by any other party against such defendant.

If, in July, 1941, some court renders a decision which brings within the Robinson-Patman law some service payment that has been generally regarded as being outside the prohibition of the act, anyone from whom any such service payment has been withheld may thereupon bring suit and recover three-fold the damages of all these discriminations back to July, 1936, plus three-fold the total of any other damages by him sustained, plus interest, and plus the cost of suit, including a reasonable attorney's fee.

QUANTITY LIMITS PROVISION

The following provision in the Robinson-Patman law is entirely new, and is intended as a further check against monopoly:

"Provided, however, that the Federal Trade Commission may, after due investigation and hearing to all interested parties, fix and establish quantity limits, and revise the same as it finds necessary, as to particular commodities or classes of commodities, where it finds that available purchasers in greater quantities are so few as to render differentials on account thereof unjustly discriminatory or promotive of monopoly in any line of commerce; and the foregoing shall then not be construed to permit a differential based on differences in quantities greater than those so fixed and established."

It is admitted that a train-load shipment can be made at much less cost per car than a single-car shipment. If, however, lower rates were permitted in such a case, large dealers would be able to destroy small dealers. Our quantity provision will apply to all modes of transportation, including trucks, barges and railroads. This quantity limit will be fixed by the Federal Trade Commission and I presume at an amount equal to a car lot in most cases but smaller quantities in others. One who purchases such a "fixed quantity" from a manufacturer will be permitted to receive it for the same price and terms as one who purchases many hundred such fixed quantities; the same theory that one who causes one car load of freight to be transported pays the same price per car as the one who ships thousands of cars at the same time.

It is true that in a proceeding brought before the Federal Trade Commission the burden of proof will shift to the accused in certain cases. In such a case, however, where the burden shifts no punishment can be inflicted; only a cease-and-desist order may be invoked. Therefore, the only concern that is in possession of the true facts cannot properly object to disclosing them under such circumstances.

*Extracts from thirty-fourth annual meeting, National Petroleum Association, Atlantic City, September 17.

N.P.A. President Tells Meeting Code Offers Opportunity

By CHARLES L. SUHR

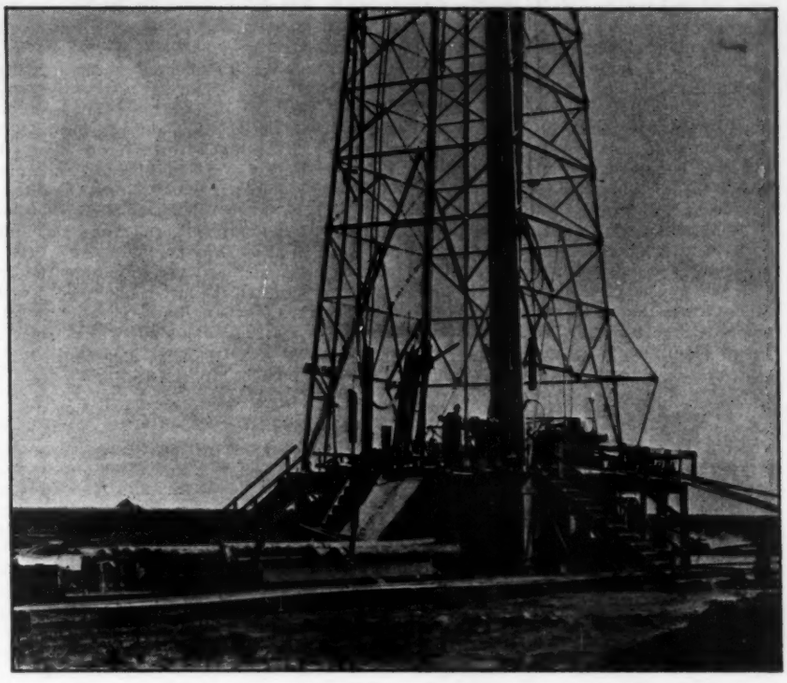
President, National Petroleum Association*

As a result of the earnest efforts, during the past two years, of several estimable gentlemen, leaders of our industry, with the cooperation of various marketing organizations, there will soon be presented to us a code of fair marketing practices for the industry. For one I am not so much concerned with what the immediate form of the code shall be. Probably it will not be anywhere near perfection at the start. If we find certain portions of it not generally applicable or altogether fair, we can change them. The important thing is that the industry has come to a recognition of the soundness of the principle of setting up rules of conduct relating to the marketing of our products. I say I am not so much concerned with what the immediate form of the code shall be, but I am concerned that we shall make a start, that this voluntary code shall form the necessary framework for whatever the ultimate structure shall be. The essential thing is that we make a beginning in self-government, and, having made that beginning, that we abide by the decisions we have reached.

*Extracts from presidential address at thirty-fourth annual meeting, National Petroleum Association, Atlantic City, September 16.

Producer on Magnet Prospect Setting Stage for Drilling Campaign

By F. L. SINGLETON



Discovery well in Magnet field

HOUSTON, Tex., Sept 14.—The completion of Texas Crusader-Cockburn Oil Corp. No. 1 H. C. Cockburn for a commercial producer at the Magnet Prospect, southern Wharton County, has set the stage for an extensive drilling campaign with the possibility there may be from 12 to 15 rigs running in that area within 30 days. Seven companies and numerous operators control protection acreage within a radius of a few hundred feet from the discovery well, creating a situation not witnessed along the upper Gulf Coast since the discovery of Conroe in 1931.

No. 1 H. C. Cockburn was washed in from a screen setting made in 10 feet of Frio sand bottomed at 5,562 feet, but due to mechanical trouble it has not been officially completed. It came in flowing at the rate of 5 bbls. of 27 gravity oil per hour through a one-eighth inch choke with tubing pressure 400 pounds and casing pressure 200 pounds, and flowed at this rate for several hours before sanding up. It is possible that before its potentiality can be ascertained the screen may have to be pulled and reset. Gas sand was topped at 5,526 feet and, while being washed in from its total depth, the well tried to blow out which resulted in the operators pumping weighting material into the hole under high pressure and for this reason the screen is believed to have become clogged.

Crater around Republic Production Co.-Houston Oil Co. No. 1 Brooks, Hardin County, Texas

The well was drilled on an original block of 5,000 acres taken by H. C. Cockburn who sold spreads to Texas Crusader Oil, Inc., Atlantic Oil Producing Co., Continental Oil Co., Shell Petroleum Corp. and Humble Oil & Refining Co. Texas Crusader Oil had charge of drilling operations with Cockburn Oil Corp. and Atlantic owning a part interest in the well. Locations for several tests are being cleared to the north and west and it is reported Shell Petroleum Corp. has made arrangements to drill on its leases to the east.

It is impossible at this time to indicate the trend of the field, but it is very likely its producing area will take in the Colorado River a short distance west which will no doubt result in the state asking for bids on the drilling rights along the river bed. The river is the west boundary line of a recently discovered "geophysical high" found to extend due south from the town of Wharton to the Matagorda County line on which six geophysical prospects have been found. Although no rules and regulations have been set by the railroad commission the field will probably be developed on a basis of one well to 20 acres.

Many conflicting theories have been advanced for the existence of this structure and the significance of this new strike cannot be confirmed until further development is done. Some contend it is a new field while others believe it to be an extension to the Withers field about 3½ miles northwest. If this latter theory is correct, production will be extended over a larger area than the Anahuac field in Chambers County, making Magnet the second largest field on the Gulf Coast.

The contention that the well is an extension rather than a new field is based on the fact the well is producing the same gravity oil from approximately the same strike as Withers. It is pointed out, however, this structural condition has been found to exist in numerous fields along the Gulf Coast and although the structure may be associated with that of Withers, production will no doubt be separated by faults or "Grabens" such as found at Dickinson, Gillis and a few others.

The abandonment of Continental Oil Co. No. 1 J. F. Weakley about 2½ miles northwest has definitely placed a fault between it and the discovery well, consequently production is not expected to be extended very far in this direction. No. 1 Weakley is one of the six prospects to be explored along the "high" and was abandoned in salt water sand at 6,511 feet, after it had checked over 350 feet structurally lower than the Texas Crusader well.

Magnet centers around the J. Smith and Hugh McKenzie surveys and is about 13 miles north of the town of Bay City, being located on black land farm plains, about 2 miles off the Bay City-Wharton highway. The extensive leasing and geophysical program carried on in this area for several months has been the highlight of Gulf Coast activities and, with the completion of this first well as an oil well together with the immediate development that is to follow and the exploration of the other known structures in that area, will no doubt keep this district in the limelight for several months.

The discovery well was the first wildcat venture of Texas Crusader Oil, Inc., recently formed to carry on an extensive drilling program along the Gulf Coast. The company was organized by W. R. Davis and associates who are reported to have developed during the past 3 years, important refining, distributing and transportation facilities in Europe including the ownership of Europaische Tanklagen u. Transport, A. G. who operates a refinery at Hamburg, Germany, and a fleet of tankers. Part of the oil produced at Magnet will be shipped to the refinery and the company is moving in material to its Lane City Prospect due north of the discovery which centers around the northern part of the Sylvanus Castleman Survey where it will drill No. 1 Hawes and Neal.

With comparatively easy drilling and no highly charged shallow gas sands to contend with light equipment will no doubt be used by the majority of the operators. After the subsurface conditions have been worked out it will be possible to complete a well within an average of about 30 days. Production practices followed at Withers will probably be applied, such as cementing 10-inch surface casing at around 1,100 feet followed by a production string of 7-inch usually cemented on bottom with the production test being made through perforated casing.

CRUDE FROM MID-CONTINENT FIELDS BEGINS ARRIVING AT MICHIGAN REFINERIES

MUSKEGON, Mich., Sept. 14.—The first consignments of Mid-Continent crude, necessitated by inadequacy of the Michigan crude supply, reached two Michigan refineries last week, one by pipe line and barges, one by pipe line and motor-truck.

Two all-steel barges towed by an ocean-going tug brought 11,300 bbls. of crude for the Old Dutch Refining Co. loaded at the wharf of the Empire Oil & Refining Co. in East Chicago, Ind. These barges will make the round trip between Muskegon and East Chicago about every five days in favorable weather to fill a contract for 60,000 to 90,000 bbls. a month between the Old Dutch and a major producing company in Mid-Continent fields.

The barges were unloaded in about 24 hours with four motors, two on each barge, forcing the crude through an 8-inch line 1½ miles from the Old Dutch wharf on Muskegon Lake to storage tanks. From the storage tanks the crude will be pumped through an 8-mile, 4-inch line to the Old Dutch plant, where a new vapor-phase cracking unit was about ready to go on stream this week. The two barges and tug were brought to the Great Lakes through the Erie barge canal with a cargo of fuel oil for Detroit on the voyage to Chicago.

The Pentagon Refining Co., of Detroit, also received its first consignment of 5,000 bbls. of Mid-Continent crude through the Buckeye Pipe Line system to Trenton under a contract with Fred Morgan, Oklahoma City operator. Leonard Refineries, Inc., of Alma, and several other Michigan independent plants are scheduled to receive their first Mid-Continent crude from the same source by Buckeye Pipe Line to Trenton and thence either by tank-truck or railroad tankcar to the refineries.

Other Michigan plants scheduled to receive Mid-Continent crude are the Inland Refineries, Inc., of Drayton Plains, and Inter-Lakes Refining Co., of Flat Rock, the former a 1,200-bbl. skimming unit and the latter a 1,000-bbl. cracking plant; and McClanahan Refineries, Inc., St. Louis, operators of a skimming plant with a capacity of 3,000 bbls. daily and a new Dubbs unit of 1,250 bbls. daily cracking stock capacity.

PLANS FOR CONFISCATION OF HOT OIL ARE FORMULATED

AUSTIN, Tex., Sept. 14.—Plans for renewal of a confiscation and penalty campaign directed at 3,000,000 bbls. of illicit crude alleged to be stored in tanks and pits in East Texas were formulated at a conference here between the state railroad commission and Atty. Gen. William McCraw. Confiscation suits and public auction of the impounded oil will be so timed as not to flood the market at any time, the attorney general said.

The state will prepare its cases in the approximately 100 penalty suits pending in the district court here. Officials said "15 or 20" of these probably would be disposed of during the fall and winter terms of court. The cases have accumulated over two years. Royalty suits will be filed against owners of oil confiscated, it was said.

Fear of a fresh outbreak of hot oil production is expressed by some. Laten Stanberry, chief supervisor of the oil and gas division of the railroad commission, said a hearing had been set for September 18 on a temporary injunction which the state has obtained against sale by federal officials of 543,000 bbls. to satisfy an income tax claim against W. E. Pope.

"If such procedure is adopted generally," Mr. Stanberry said, "there is nothing to prevent the holder of hot oil from transferring it to any person against whom the federal government has a tax claim and having it marketed that way. Then, he can again fill up the pits or tanks from which that oil was taken and repeat the process."

An appeal may be made to the United States Department of the Interior to join the state in protest against the federal revenue department's course.

HONORED BY OIL CHEMISTS

Dr. Jacques C. Morrell, associate director of research for Universal Oil Products Co., was unanimously selected as chairman of the petroleum division of the American Chemical Society at the recent Pittsburgh, Pa., meeting of the society. He succeeds F. W. Hall, research director of The Texas Co., as chairman. Dr. Per K. Frolich, chief chemist of the Standard Oil Co. of New Jersey was elected vice chairman and Frank W. Hall of The Texas Co. and Joseph K. Roberts of the Standard Oil Co. of Indiana were made members of the executive committee. C. R. Wagner, chief chemist of the Pure Oil Co., was re-elected secretary of the division.

SPACING RULE IS IGNORED AT PRORATION HEARING

AUSTIN, Tex., Sept. 11.—Contrary to expectations, the state railroad commission at the monthly proration hearing today received no testimony on its general oil-well spacing rule. The commission had announced it would consider changing the basic rule of one well to 2.1 acres to one well to 10 acres. Col. E. O. Thompson explained later that operators had requested postponement both because essential data were not in hand and because they were reluctant to open up a controversial subject. He added that he did not know when a hearing on the spacing rule would be held.

E. V. Cottingham, commission engineer, reported that bottom-hole pressures in East Texas had declined 3.5 pounds per square inch in the last month. He said the average pressure dropped from 1,187 pounds on August 12 to 1,183.5 pounds on September 10, and during the period the allowable production was 12,572,134 bbls., making the pressure decline .278 pounds per 1,000,000 bbls.

A large decline in pressure usually has been followed by a reduction in the allowable, which on September 1 was 434,000 bbls. daily and on September 7, 434,792, figured with the factor of 2.32 per cent of the hourly well potential.

CONTINENTAL CHANGES

Appointment of M. H. Shanahan, formerly superintendent of the Wichita Falls production division, to be assistant manager of Continental Oil Co. production department, has been announced by President Dan Moran. Shanahan succeeds E. O. Bennett, named chief petroleum engineer. Bennett succeeds in this position R. Van A. Mills, who was appointed proration agent, a new position.

CHANGES ARE ANNOUNCED BY DALE W. MOORE OIL CO.

Two additions to the official personnel of the Dale W. Moore Oil Co., Tulsa, have been announced. L. M. Lingenfelter is now vice president in charge of sales, with his headquarters in Tulsa, and E. "Jay" Glover is also made a vice president with headquarters in Minneapolis, Minn.

L. M. LINGENFELTER

For the last seven years Mr. Lingenfelter was located in Omaha, Neb., as representative of the Rock Island Refining Co. of Duncan, Okla., in several northern states. Prior to his connection with Rock Island he served as sales manager of the old Miller Petroleum Co. in Kansas City, Mo.

Mr. Glover is to serve as division manager of several northern states. Since 1928 he has been a vice president in charge of sales of the Rock Island Refining Co. R. W. Hunt, formerly in charge of the Minneapolis territory, becomes division manager of a new office opened by the company in St. Louis.

E. "JAY" GLOVER

Dale W. Moore, president, announced other changes that affect division sales offices of his company. In Chicago, C. M. Raemer, formerly sales representative of the Rock Island Refining Co., will be in charge. The Cedar Rapids, Iowa, office is now in charge of R. F. Henderson, and the Shreveport, La., office is in charge of D. MacDonald.

ACCUSED OIL COMPANIES DENY WISCONSIN JURISDICTION

MADISON, Wis., Sept. 14.—The Mid-Continent Petroleum Corp., Skelly Oil Co. and Deep Rock Oil Corp., indicted with others for alleged violation of the Sherman Antitrust law, have filed motions denying the jurisdiction of the federal district court of Wisconsin. The three companies contend that if the alleged offenses were committed at all they were committed outside of Wisconsin and that indictments therefore cannot be brought in this state. Federal Judge Patrick T. Stone fixed December 1 as the date for hearings on the motions.

The federal grand jury investigating marketing practices in the oil industry adjourned last Saturday until October 6. The grand jury already has indicted 58 individuals, 23 oil companies and three trade journals. William P. Tracy, bulk sales manager for the Sinclair Refining Co. in Fort Worth, Tex., and one of the oil men under indictment, was named in a second indictment last week, charging perjury. Mr. Tracy has given bond. Frank Phillips, president of the Phillips Petroleum Co., against whom an indictment was returned, has given bond of $5,000 for his appearance November 2. E. B. Reeser, president of the Barnsdall Petroleum Corp., also a defendant, has not yet returned from a European trip.

SHELL AND WORKERS AGREE

MEXICO CITY, Sept. 14.—Danger of a serious oil strike was ended when El Aguila (Royal Dutch Shell) Petroleum Co. reached an agreement settling a three months' strike of workers in the Nanchital, Vera Cruz, oil fields. The arrangement, worked out with the help of the labor ministry, provides for payment of 80 per cent of salaries during the period of the strike and increased sick benefits. Employes of three other companies who had threatened a sympathy walkout withdrew their strike notifications.

FLEXIBLE • PORTABLE • COMPACT • ECONOMICAL

EMSCO
FAIRBANKS-MORSE
GARDNER-DENVER

Emsco 46-inch 4 or 8 speed Portable Drilling Machine with Fairbanks-Morse 8 Cylinder Model 36-A Diesel Engines and Gardner-Denver 7¼ x 14 FXK Power Slush Pump.

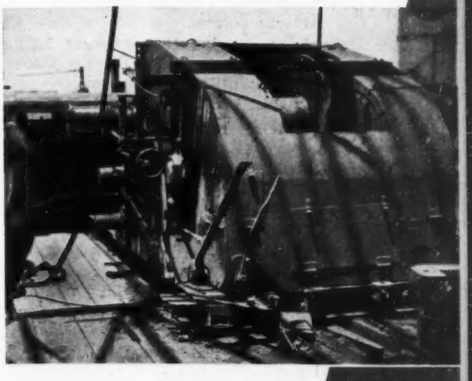
PORTABILITY: This drilling machine with Dual Motor Drive is composed of seven separate units, combined to make an efficient as well as easily transportable unit. Less than two full days required to rig up—initial drilling contract completed in sixteen days.

FLEXIBILITY: Engines can be compounded to drawworks and pumps, or either one. By compounding the two motors, heavier drilling strings are handled with ease. When drilling, one motor operates rotary machine through a reverse and friction clutch, and second motor operates the pump through a countershaft.

Showing chain transmission from engines to drawworks and pumps.

COMPACTNESS: Diesel Engines are mounted on unitary base with drawworks, Emsco Type "H" Reverse and Friction Clutch, and Emsco Type "GA" Countershaft. Entire unit approximately 40 feet long.

ECONOMY: Speed in rigging up, frugality in fuel consumption, and efficient operation makes the unit most economical.



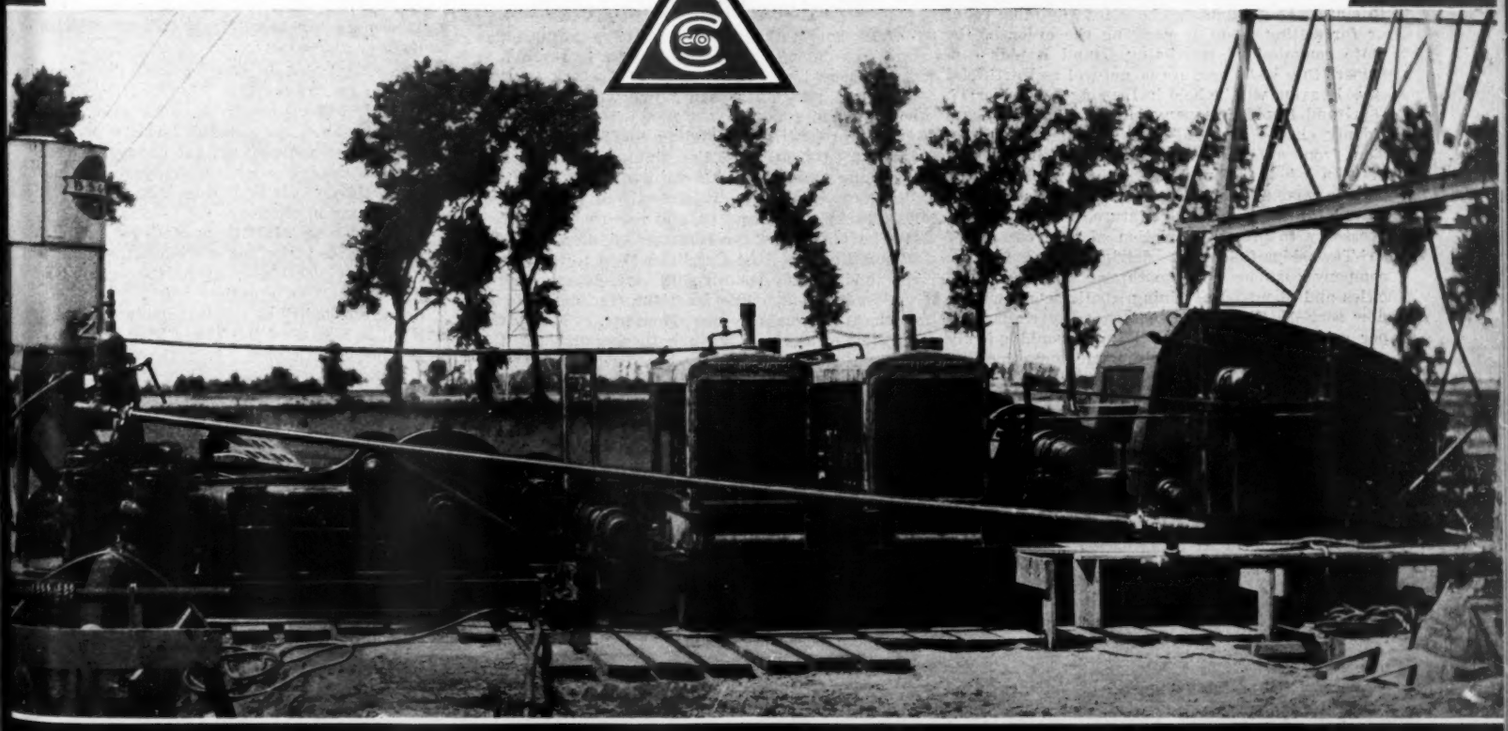
Showing front view of drawworks and control.

THE CONTINENTAL SUPPLY COMPANY

General Offices: DALLAS, TEXAS

Export Office: CONTINENTAL EMSCO CO., Inc.
30 Rockefeller Plaza New York City, N. Y.

Representatives:
LONDON MARACAIBO PLOESTI BUENOS AIRES



CONTINENTAL

Natural Gas News

Texas Conservation Suit

AUSTIN, Tex., Sept. 14.—The Railroad Commission instituted its first penalty suit under the gas conservation act for violations in the Panhandle field. The Henderson Co. of Amarillo, operator of a gasoline extraction plant in Hutchinson County, West Panhandle zone, was named defendant in the suit, in which penalties of $126,000 were sought for alleged violations during July.

Attorney General William McCraw filed the suit in district court and obtained a temporary injunction restraining the company from overproducing sour and sweet gas wells. The order forbids the company from overproduction, using sweet gas for manufacturing carbon black, making incorrect reports, popping off gas before or after it has been processed for its gasoline content, from using sweet gas in excess of its actual light and fuel requirements.

The suit asked $124,000 penalties for alleged overproduction of four wells during July in excess of 25 per cent of the potential, the statutory maximum, and $2,000 for alleged incorrect reports to the commission. The petition asserted the company's actual requirement for light and fuel purposes was 1,500,000 feet daily, whereas it had purportedly used 7,500,000 feet.

It was pointed out also a three-judge federal court, in denying the company injunctive relief, had held constitutional the provision of the law denouncing utilization of sweet gas for burning and carbon black manufacture. The company has appealed to the supreme court of the United States.

Michigan Gas Litigation

MUSKEGON, Mich., Sept. 14.—Consumers Power Co., operators of natural gas pipe lines from the Tri-Townships field of central Michigan to Saginaw, Bay City and Lansing, has joined the Michigan Public Utilities Commission in opposing the Grand Rapids Gas Light Co.'s attempt to serve Grand Rapids consumers with 100 per cent natural gas.

The Consumers company filed an answer to the Grand Rapids company's bill of complaint charging the Grand Rapids company has "wholly failed to state any grounds or cause for equitable relief or for setting aside or vacating the order of the state commission" restricting Grand Rapids consumers to a 50-50 mixture of natural and artificial gas. Hearing will be held in Lansing September 17.

Grand Rapids company has asked the Ingham County circuit court to enjoin the state commission from enforcing its order. The intervening petition of the Consumers company claims the state commission acted within its rights to limit Grand Rapids to a 50-50 mixture, a step declared necessary to prevent depletion of the reserves of Tri-Townships field to the detriment of Consumers company customers in the three major industrial cities and about 50 adjoining smaller communities now served. The Consumers company claims 100 per cent service to Grand Rapids would quickly exhaust the reserves imperiling previous pipe line investments.

Gas Revenues Gain

NEW YORK, Sept. 14.—Domestic customers served by manufactured and natural gas utilities totaled 15,164,100 on June 30, an increase of 26,000 during the first six months' interval, according to Paul Ryan, chief statistician of the American Gas Association.

This gain in customers is reflected in the fact that a total of 700,000 gas ranges were sold in the country during the first half of 1936. This was an increase of nearly 30 per cent over the first six months of 1935. Approximately 80 per cent of such sales consisted of relatively high-priced ranges incorporating modern automatic features, such as oven-heat control, etc.

Revenues of manufactured and natural gas utilities aggregated $418,914,100 for the first six months of 1936. This was an increase of 7.4 per cent over the corresponding period of 1935. Revenues from industrial and commercial users increased 15.7 per cent, while revenues from domestic customers gained 4.1 per cent.

Manufactured gas industry revenues totaled $196,732,400 for the first six months, a gain of 2.1 per cent. Revenues from industrial and commercial uses of manufactured gas gained 11 per cent. Revenues from domestic uses, such as cooking, water-heating, refrigeration, etc., were 1.2 per cent less than for the corresponding period of 1935.

Revenues of the natural gas industry for the first six months amounted to $222,181,700, a gain of 12.6 per cent over a year ago. Revenues from industrial uses increased 20 per cent, while revenues from domestic uses gained 9.3 per cent.

San Antonio Franchise

SAN ANTONIO, Tex., Sept. 14.—Renewal of the gas franchise of the San Antonio Public Service Co. would be no bar to a municipally owned pipe line, City Attorney T. D. Cobbs said after he finished listing other items that would prohibit such an enterprise; such items as public refusal to vote a bond issue, the uneconomical administration of such a project and a few others.

Request for Mr. Cobbs' opinion was based on the recent statement of Charles M. Dickson that the San Antonio Utilities League will start a movement for a publicly owned pipe line next fall. Mr. Cobbs said an exclusive franchise cannot be granted and that the franchise with the utility company is merely a contract giving permission to use the streets and other public ways.

The franchise will be renewed, along with the electric power and light franchise, for a 20-year period beginning in 1940. In return for the franchise renewal the utility company will make a reduction in rates November 1.

To Serve Nebraska Towns

The Southern Nebraska Natural Gas Co., with Reece McGee of Blackwell, Okla., as president, has been recently organized to serve the cities of the Republican River area of Nebraska with natural gas. These cities include Oxford, Arapahoe, Holbrook, Cambridge, Stanford, Ellison, Bartley and Indianola. Headquarters of the company will be located at Oxford, Neb.

New O.N.G. Comptroller

O. L. Jones, who has been vice chairman of the accounting section of the New England Gas Association, at Pawtucket, R. I., has been appointed comptroller of the Oklahoma Natural Gas Co.

Pipe Line Activity

Finney County Project

GARDEN CITY, Kan., Sept. 14.—A 10-inch gas line is projected by the Tri-County Pipe Line Co. to carry gas north of the Arkansars River, by which Finney County will supply gas to Scott City and Lakin, where franchises have been voted the company. The line would be 70 miles long and carry gas from the Hamlin well, 10 miles southwest of Holcomb. Eventually it may be extended to the Nebraska line. Three Finney County wells now produce 15,000,000 feet of gas daily.

Montana-Minnesota Project

The long talked of project of a natural gas line from Montana into Minnesota is revived in a statement by E. B. Coolidge of Great Falls that there is a possibility such a line will be financed with federal funds.

The proposition, according to Mr. Coolidge, is for a $50,000,000 pipe line linking Montana and Wyoming gas fields with the Twin Cities and the Minnesota iron range. It is now being investigated, he says, by the federal natural resource committee.

The plan calls for construction of a 400-mile 20-inch line from the Cut Bank field to the Baker gas field, in the eastern part of Montana, and of a 235-mile 18-inch line from the Garland field in northern Wyoming, into Montana. From the junction of the two main gathering lines at the Baker field, plans call for construction of a 465-mile 24-inch main line east to Brainerd, Minn. At Brainerd, the line is to be split, with 155 miles of 18-inch line to be constructed northeast to Duluth and the smelters of the iron range, and a 95-mile 24-inch line to be extended to the Twin Cities, serving cities en route.

Laterals are planned to tap the Sweet Grass Hills gas areas, fields in the Bowdoin and Big Sandy areas and also near Poplar, and a southern line to take in the Dry Creek field.

Intangible Tax Test

AUSTIN, Tex., Sept. 14.—Four oil pipe line companies have obtained temporary orders enjoining the state tax board from collecting levies on their intangible assets.

The suits, filed in district court by Magnolia Pipe Line Co., Texas Pipe Line Co., Humble Pipe Line Co. and Texas-Empire Pipe Line Co., renewed litigation against the constitutionality of the tax instituted last year by several companies.

The restraining order was returnable October 5 at which time a hearing will be held on application for temporary injunctions.

Attorney General William McCraw said it had not been decided whether to contest the temporary injunction application or await the outcome of a case pending in an appellate court.

Constitutionality of the intangible tax law was involved in a case of the Texas Pipe Line Co., set for submission October 14 in the third court of civil appeals.

Cotton Valley Line

SHREVEPORT, La., Sept. 14.—Standard Oil Co. of Louisiana is laying plans for construction of a gathering system into the Cotton Valley field from its Baton Rouge trunk line, following the recent discovery of oil in the deep horizons. This company formerly had a line into Cotton Valley serving the shallow sand wells, but as they depleted the line was removed.

Gas Telephone Line

Canadian River Gas Co. has been given permission by the city commission to construct a telephone line in Amarillo, to connect with a line outside of the city leading to the gas fields. The grant covers a period of 50 years.

OBITUARIES

JOSEPH W. ORR, 74, former managing editor of the Oil City Derrick, died in Oil City, Pa., last week.

HUBERT AMBISTER, 45, attorney for Magnolia Petroleum Co. since 1918, died last week after an illness of several months, at Oklahoma City.

J. McC. MOFFETT, 64, vice president in charge of sales since the formation of Midwest Piping & Supply Co. Inc., in 1920, died suddenly Sept. 5. He was formerly identified with Chapman Valve Co. and Standard Oil Co. of Indiana.

Refinery Expansion

Reopening Golden West Plant

SAN ANTONIO, Tex., Sept. 12.—Ina Oil & Refining Co., owned by F. M. Shaver and G. Tiffeny, have acquired the Golden West Oil Co. property in Medina County and are rebuilding the old plant at Hondo. The new operators will double the capacity of the plant which has been closed down for some time. Capacity of the plant is now 150 bbls. daily. Crude will be taken from the Ina field in which there are seven wells now producing.

Medicine Hat Refinery

MEDICINE HAT, Alberta, Sept. 12.—Medicine Hat Refining Co., Ltd. has been incorporated under Alberta charter with authorized capitalization of $750,000. The company is planning to construct a refinery at Medicine Hat.

New Refinery Opened

LETHBRIDGE, Alberta, Sept. 12.—The Huff Refining Co. plant on the Coutts Highway east of Lethbridge was officially opened last week. The plant will operate 24 hours a day and sell direct to retailers, the output including Rock and Crystal gasolines, kerosene distillate, tractor distillate and diesel oil.

New Wyoming Refinery

DENVER, Colo., Sept. 12.—Home Oil & Refining Co. has now begun operation of its new refinery at Lander, Wyo., the first runs to stills beginning this week. The refinery is owned and operated by J. A. Decker of Lander and will specialize in the manufacture of tractor fuels.

Refining Company Organized

VANCOUVER, British Columbia, Sept. 12.—B. C. Consumers Oil Refinery Co., Ltd., has been incorporated with an authorized capitalization of $1,000,000. The company plans to deal in petroleum products in British Columbia and may ultimately erect a refinery near Vancouver.

Building Crude Rectifying Plant

DENVER, Colo., Sept. 12.—Construction of a $110,000 rectifying unit was started this week in Carbon County, central Wyoming, for the Ohio Oil Co., the contract being let to the C. F. Braum & Co., Inc., of Alhambra, Calif. The plant will have a daily capacity of around 2,000 bbls. and will process crude from the Big Medicine Bow field. The plant is expected to be in operation in about 60 days.

The treating plant, a type which has been used extensively in California for rectifying crudes, will remove the propane from the oil without destroying the other hydrocarbons that are blown out in the steam treatment of the crude. Oil at Big Medicine varies from 64 gravity in the discovery well to 59 degrees gravity in wells located lower structurally. The plant is expected to reduce the gravity of the crude about 2 degrees.

Rodessa Gas Control Order Is Promised by Gov. Leche

BATON ROUGE, La., Sept. 14.—Gov. Richard W. Leche told Rodessa field operators today a temporary gas production control order would be issued prior to promulgation of permanent regulations which he said would be enforced by militia "if necessary."

After conferring with producers regarding curbing of gas waste in Rodessa, the governor said the state conservation department would issue the temporary order "in a few days" for a 40-day period.

He did not disclose the terms of the order, and said another meeting would be held with the producers order to draft the permanent regulations.

"Once we issue the regulations, the militia will be used if necessary to enforce them," he said. "We will put two companies of guardsmen at each well if we have to."

The governor received recommendation from H. W. Bell, engineer of the Rodessa operators' committee, and P. O. Murphy of the Phillips Petroleum Co., committee chairman, that oil wells be limited to 12,500 feet of gas per barrel per day and 3,000,000 feet well total a day. Texas allows 2,000 feet per barrel.

W. A. Tharpe and W. F. Lacey, independents, said that since distillate wells produced no oil, they should be placed on a 25,000 and 6,000,000 basis. Bell said gas waste had lowered pressure in the field an average of three pounds.

Ted Hall of Kilgore, Tex., urged the proration proposed apply to the lease basis instead of per well. J. R. McWilliams of the Standard Oil Co. said the 12,500 figure was absurdly high."

Teagle Sees Continuance of Increasing Demand

NEW YORK, Sept. 14.—A qualified prediction that the oil industry may expect to see consumption increase until it exceeds any previous standards was made by Walter C. Teagle, president of Standard Oil Co. of New Jersey in London, England.

"Unless some outbreak of political passion or unwise economic policies leads to a renewal of the business slump," Mr. Teagle said, "we may expect to see oil consumption go on increasing until it reaches a point far in advance of any previous standards. Consequently, the oil industry, which always is obliged to look ahead and take the long view, is preparing for the future by searching for new sources of crude oil supplies."

Medicine Hat Organization

MEDICINE HAT, Alberta, Sept. 12.—The first unit of the Medicine Hat municipal gas system has been odorized to assist in detection of leaks in mains and services. It is expected the work of odorizing the whole system will be completed this year.

Natural Gasoline

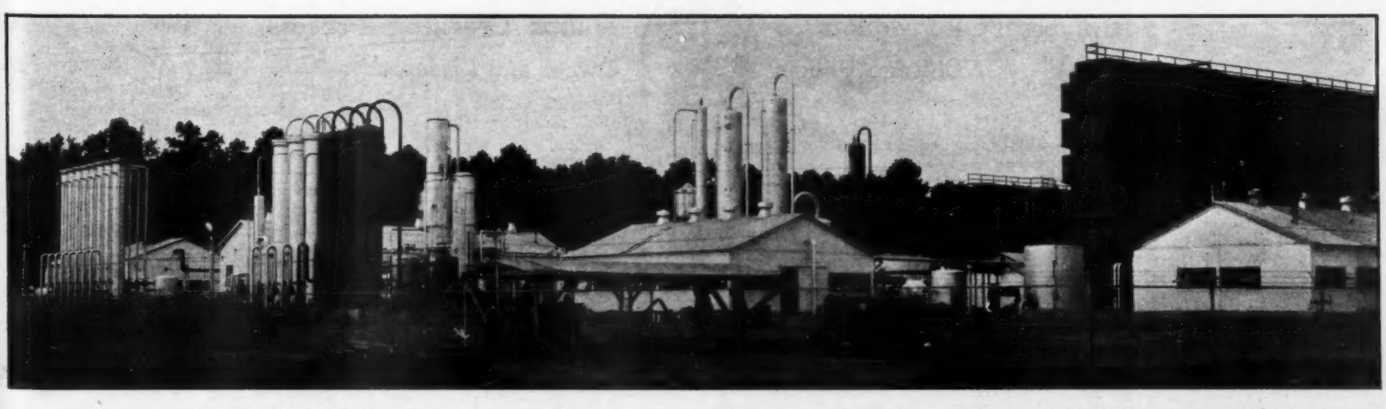
Bureau of Mines July Report

The production of natural gasoline continued to increase in July according to a report by the Bureau of Mines for that month. The daily average in July was 4,545,000 gallons compared with 4,504,000 gallons in June. Daily average production in the Panhandle showed little change from June but the output at Kettleman Hills, East Texas and Oklahoma City materially increased. Total production in gallons of the four largest fields during July was as follows: Panhandle, 15,009,000; Kettleman Hills, 13,017,000; East Texas, 13,012,000, and Oklahoma City, 9,962,000.

Total production of the various districts during the month in thousands of gallons was: Appalachian, 3,954; Illinois, Michigan, Kentucky, 760; Oklahoma, 33,540; Kansas, 2,589; Texas, 40,878; Louisiana, 4,263; Arkansas, 1,016; Rocky Mountain, 5,500, and California, 48,410.

Stocks of natural gasoline showed the first decline in several months as the refinery demand began to respond to seasonal influences. The decrease, which amounted to 1,554,000 gallons, was all in plant and terminal stocks as refinery stocks increased. Total stocks at the end of July were 243,264,000 gallons of which 122,850,000 gallons were at refineries and the remainder, 120,414,000 gallons, at plants and terminals. The greater portion of the decrease in stocks was in Texas, refinery stocks decreasing from 9,408,000 gallons on June 30 to 7,896,000 gallons on July 30 and stocks at plants and terminals decreasing from 73,651,000 gallons to 69,986,000 gallons on July 31.

Direct movement of natural gasoline to the trade continued heavy in July, jobbers and retailers taking 10,366,000 gallons compared with 10,020,000 gallons in June. Exports, however, declined from the high figure of 10,503,000 gallons in June to 7,972,000 gallons in July. No definite trend in vapor pressures was evidenced in July, the average for refinery shipments (19.2) being lower but the average for direct shipments higher.



United Gas Public Service Co.'s absorption plant at Myrtis, La., south of Rodessa, now under enlargement from 60,000,000 feet to 140,000,000 feet

Words to the wise

A suggestion that Mid-Continent refiners pay close attention to monthly forecasts and recommendations of the Bureau of Mines in order to improve their statistical position, was presented to the Western Petroleum Refiners Association at a meeting in the Mayo Hotel

from the Tulsa World

That's good advice

And here is another suggestion to ALL refiners

Make high octane, long mileage gasoline that goes to customers as fast as you can make it—not to storage

Dubbscracking is the way to make that kind of gasoline

Universal Oil Products Co
Chicago Illinois

Dubbs Cracking Process
Owner and Licensor

Oil News from Foreign Lands

Many Busy on Aquila Refinery

Approximately 1,500 men are working on the Aquila S. A. refinery construction program under way at Trieste, Italy. The main structures of the warehouse and work shop are complete and the electric power transformer station is partly functioning. An intra-refinery railroad system is being constructed which will be capable of handling more than 50 cars of products daily. The railroad is being used in construction work.

Approximately 400,000 square meters of ground is being leveled, excavated and graded for the new refinery. Up until August about 700 workmen were engaged in the project. Increase of workmen was due to the management's desire to hasten construction. A pier having frontage of 400 meters is being constructed along the waterfront facing the refinery, permitting the largest tank ships afloat to dock. There will be approximately 70 tanks of various dimensions, with total capacity of 110,000 cubic meters, said to be about a fifth of the annual gasoline consumption in Italy.

ITALY

When completed, the Aquila refinery will have capacity of 5,500 to 7,000 bbls. of crude oil a day and the average annual output is calculated at about 2,100,000 bbls. of finished products. In a further effort to divorce itself from dependence on outside petroleum supplies, the Azienda Nazionale Indrogenazione Combustibili is preparing to construct hydrogenation plants at Leghorn and at Bari.

The Bari plant is to be designed to operate on heavy crude from Albania. The Albanian crude, produced from the Kucciova fields, will be transported by Azienda Italiana Petroli Albania through the recently completed 85 kilometer pipe line from the field to the port of Valona, Albania. From Valona, the crude will be moved via tankers to Bari.

The hydrogenation process to be used in both the Leghorn and Bari plants is reported to have been developed by Giacomo Fauser, inventor of the successful synthetic ammonia manufacturing system. Experiments with the process carried on at Novara are reported to have produced highly successful results. A third hydrogenation plant for processing lignite and bituminous shale may be erected by Italians in Valdarno, province of Florence where reserves for the process exist.

Venezuela Production Rises

Crude oil production in Venezuela continued its gradual rise last month and set another recent peak of 13,538,049 bbls. for the 31 days of August. During July, Venezuela production amounted to 13,433,173 bbls., which at that time was also a record yield. A year ago last month the South American country accounted for production of 12,860,955 bbls., nearly three-quarters of a million barrels less than current yield.

Lagunillas and Quiriquire are the fields in which major production gains over August, 1935, have been registered so far this year. Most of the other Venezuelan fields are approximately level with last August's production records or slightly below. However, the Mene Grande pool's production of 1,476,900 bbls. last month is nearly 175,000 bbls. over estimates of a year ago. La Paz, Concepcion, Terra, and La Rosa-Ambrosia are the fields in which current production is lagging behind that of 1935.

VENEZUELA

Lago Petroleum Co. and Standard Oil Co. of Venezuela, both subsidiaries of Standard of New Jersey, are producing nearly 50 per cent of Venezuela's current crude output. Both Standard of New Jersey affiliates increased their production in August over July figures and their combined yield is substantially above what they were producing at this time in 1935.

Caribbean and Venezuela Gulf Oil Co. increased their production slightly last month, compared with July, but losses were suffered in the yield from properties of Venezuela Oil Concessions, Ltd., Colon and British controlled.

The daily average production in Venezuela during August amounted to 436,617 bbls., against 433,329 in July and as compared with 414,871 bbls. in August, 1935.

VENEZUELA CRUDE OIL PRODUCTION FOR AUGUST

By fields:	August production 1936	Daily average Aug., 1936	August production 1935	Daily average Aug., 1935
Lagunillas	7,447,510	240,243	7,088,776	228,670
La Rosa-Ambrosia	1,762,013	56,839	1,902,455	61,370
Mene Grande .	1,476,900	47,642	1,301,800	41,994
El Mene	79,670	2,473	69,400	2,239
Terra	346,800	11,187	423,000	13,645
La Paz	12,700	410	12,500	403
Concepcion	92,400	2,981	122,800	3,961
Cumarebo	219,148	7,070	261,060	8,422
Quiriquire	2,100,928	67,772	1,679,164	54,167
Totals	13,538,049	436,617	12,860,955	414,871
By companies:				
Lago Pet. Co. ..	4,539,212	146,426	3,919,716	126,442
Venezuela Oil Co.	3,125,900	100,835	3,253,010	104,936
*Standard of Venezuela ..	2,675,780	86,317	2(429,029	98,355
Caribbean	1,476,900	47,643	1,301,800	41,994
Colon	346,800	11,187	423,000	13,645
Venezuela Gulf	1,239,000	39,968	1,465,000	47,200
British Controlled	79,670	2,473	69,400	2,239
North Venezuela Pet. Co.	54,787	1,768	(†)	(†)
Totals	13,538,049	436,617	12,860,955	414,871

*Includes Creole's share in La Rosa and Lagunillas.
†Included in Standard of Venezuela production.

Australia Establishes Subsidies

To speed exploration for petroleum in Australia, the country's cabinet last week decided to broaden the incentives and set up a schedule of subsidy disbursement to that end. The cabinet's decision was based on recommendation of the Defense Council that everything possible be done to make Australia independent of foreign supplies. In furthering the program the Australian cabinet decided to disburse up to 50,000 pounds (approximately $250,000) on a basis of one for two spent by individuals in geological surveys. The remainder of the Australian government's 50,000-pound subsidy, established to attract oil exploration, is to be reserved for approved companies engaged in drilling on a pound-for-pound basis.

AUSTRALIA

Will Explore Greece

An oil exploration concession centering around Alexandropolis is reported to have been granted by the Greek government to an English group, which has assumed obligation to drill to at least 1,000 meters within three years. Another concession carrying similar provisions was awarded to the English group in the Vardar Valley. Before the war, the Turkish government had granted a concession in the Alexandropolis area to an English group, but the drilling and exploratory obligations were not fulfilled and the privileges were canceled.

GREECE

British Refining Gain

Indicative of general improvement throughout the world's petroleum business in 1935 and continuing so far this year, the United Kingdom's refining industry registered its first gain in liquid yield last year since a decline which started in 1931. There was an over-all gain in stocks charged to stills, another trend which had been in the opposite direction since 1931. Irrespective of greater refinery operation and heavier liquid yield from the United Kingdom's plants, the country remains essentially dependent on imports for its petroleum supply. Discounting basic exports and products entering the country for re-export business, the United Kingdom acquired from outside sources nearly 60,500,000 bbls. of petroleum products during 1935, or about 500,000 bbls. more than registered in 1934. From 1932 to 1935, main petroleum imports into the United Kingdom climbed from 49,640,000 to 60,468,000 bbls. However, the rate of increase in imports dropped during the last complete year for which records are available from an annual average rise of 5,000,000 bbls. from 1932 to 1934. Probably indicative of more extensive activity in the heavier manufacturing industries and in the broader use of automobiles during 1935 is the fact that the chief gains in imports were listed for gasoline and the diesel and fuel oils.

UNITED KINGDOM

The increase in imports for 1935 was confined entirely to gasoline. Supplies of gasoline from outside sources imported into the United Kingdom in 1935 amounted to 35,311,000 bbls., against 32,169,000 bbls., the previous year; 30,660,000 in 1933 and 27,749,000 bbls., in 1932. The accompanying tables compiled from complete reports for 1935 in the Board of Trade Journal, London, and from the Bureau of Mines' International Petroleum Trade report, show the refinery operating rate, the yield, imports and exports of main products.

Chief exports:	1935	1934	1933	1932
Gasoline	3,091,000	2,377,000	1,923,000	2,191,000
Propane-Butane, etc. ..	49,000	65,000	66,000	206,000
Kerosene	368,000	563,000	634,000	708,000
Gas oil	780,000	834,000	600,000	383,000
Lubricating oil .	551,000	472,000	397,000	312,000
Fuel and diesel oil	672,000	477,000	406,000	263,000
Total	5,511,000	4,788,000	4,026,000	4,063,000
Import balance	60,468,000	60,056,000	54,523,000	49,640,000

UNITED KINGDOM REFINERY OPERATIONS
Final for 1935 and Comparison
(Figures in Barrels)

Charging stock:	1935	1934	1933	1932	1931	1930
Crude oil	13,194,000	13,274,000	11,494,000	10,320,000	10,380,000	12,257,000
Partly refined	2,343,000	1,897,000	3,269,000	4,703,000	6,603,000	6,391,000
Shale oil	846,000	900,000	840,000	849,000	1,043,000	1,194,000
Totals	16,383,000	16,071,000	15,603,000	15,872,000	18,026,000	19,842,000
Liquid refinery yield:						
Gasoline	3,823,000	4,137,000	4,269,000	4,551,000	5,149,000	5,157,000
Propane, butane, etc.	574,000	697,000	531,000	486,000	597,000	603,000
Kerosene	957,000	986,000	1,097,000	1,229,000	1,526,000	1,411,000
Gas oil	1,466,000	1,526,000	1,323,000	1,054,000	1,014,000	820,000
Lubricating oil	734,000	706,000	546,000	546,000	543,000	694,000
Fuel and diesel oil	4,603,000	3,811,000	4,049,000	4,546,000	5,537,000	7,746,000
Other	.....	3,000	291,000	151,000	180,000	309,000
Total	12,157,000	11,866,000	12,166,000	12,563,000	14,546,000	16,740,000
Chief imports:						
Gasoline	35,311,030	32,169,000	30,660,000	27,749,000	.....	.....
Propane, Butane, etc.	463,000	566,000	437,000	426,000	.....	.....
Kerosene	5,480,000	6,329,000	5,291,000	6,191,000	.....	.....
Gas oil	3,083,000	2,729,000	3,249,000	2,774,000	.....	.....
Lubricating oil	2,871,000	2,954,000	2,931,000	2,466,000	.....	.....
Fuel and diesel oil	18,771,000	19,097,000	15,971,000	14,097,000	.....	.....
Total imports	65,979,000	64,844,000	58,549,000	53,703,000	.....	.....

the OIL AND GAS JOURNAL

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A Sounder Basis

As normal conditions return it becomes apparent that many new developments in industrial progress or improvement of the standard of living are dependent upon the oil industry. The depression temporarily postponed or stopped many developments clearly in the making in the late 20's which are now being exploited, notably in the power, heating, lighting, refrigerating and chemical fields, in all of which petroleum products play a large and constantly expanding part.

These developments should be encouraged by the oil industry because a wider scope of applications means a sounder basis for the industry. It should be remembered that a substantial part of crude oil is still being disposed of as a fuel in competition with cheap coal. This means it can be used only as long as crude can be produced cheaply enough to permit its sale as fuel at a low price.

There is also the danger competition will find still cheaper methods or that the cost of producing crude may force the oil industry to give up that part of its market. This emphasizes the necessity for the industry to get as many superior uses as possible.

The diesel engine is an illustration. This engine, designed to utilize the heavier fractions of crude, is, due to flexibility and availability, finding applications practically everywhere in every power field.

While many of these applications are replacing steam power generated by fuel oil and, from the standpoint of volume, the oil industry may seem to be losing more than it gains, there is the important difference that the superior use is on a sound basis with no fear a reasonable increase in price will lose that market.

The best illustration is the steam train burning fuel oil, subject to the constant danger of being replaced by coal. The diesel-powered train uses fractions of the crude for which higher prices can be obtained without risk of competition, the cost of fuel being a minor factor.

So it was with the development of gasoline from the lighter fractions. Despite all the efforts to provide substitute motor fuels, gasoline maintains its strong position not likely to be successfully challenged.

There is no apprehension that diesel fuel will replace gasoline; rather they supplement each other, each having its own particular application.

The rapidly expanding use of the diesel engine developing power from the heavier fractions of crude is an example of the superior uses of oil which the industry should strive to stimulate. The utilization of petroleum products for which the user can afford to and will pay more than for inferior uses will put the industry on a much more substantial foundation.

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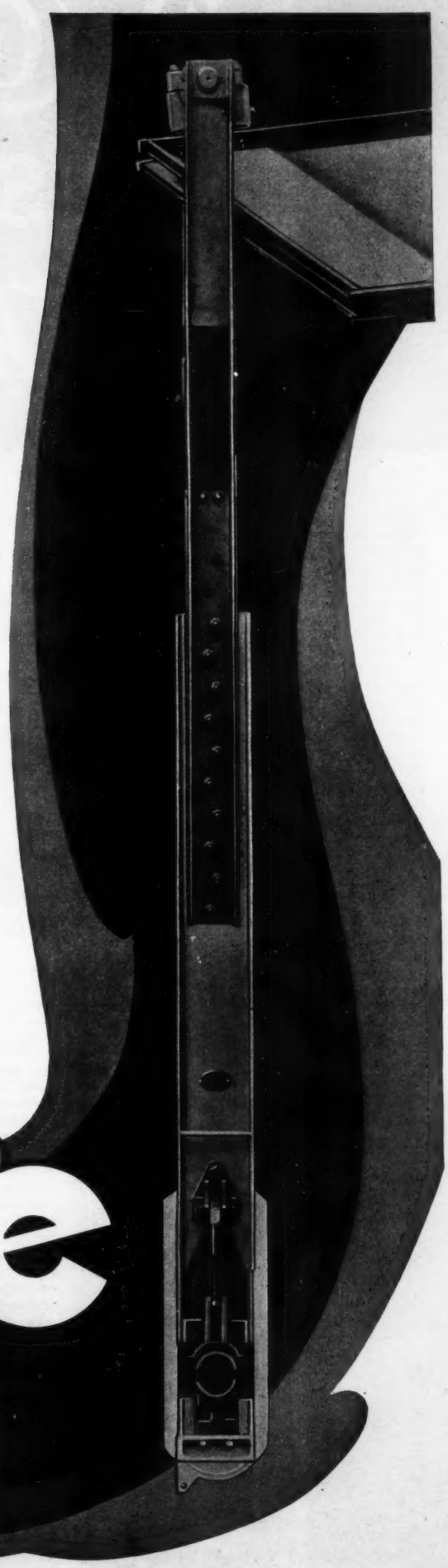

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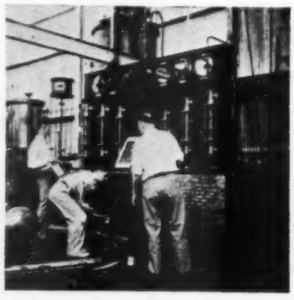
STOCKS IN ALL ACTIVE FIELDS

AGROL GASOLINES

Will They Succeed?

By W. T. ZIEGENHAIN

Before the close of the year, motorists in at least seven middle western farming states will see the word "Agrol" prominently displayed at many of their filling stations. This will start the carefully planned sale of three grades of alcohol-gasoline blends under the sponsorship of the Chemical Foundation of Kansas Co. and this will be done in direct competition with the regular grades of refinery gasoline now offered. It is significant that these blends are to be sold free of legislative aid. It appears to be the will of the foundation to find an answer to the question once and for all: "Can alcohol-gasoline blends be manufactured and sold economically in the United States?" And they are cooperating with the Bailor Manufacturing Co. in starting America's first power-alcohol plant. This plant, located at Atchison, Kans., will produce 10,000 gallons of alcohol per day from a variety of farm products, and will serve as a research and demonstration unit.



Still control board

The foundation knows that the success of the program depends upon the economic soundness of ethyl alcohol as a motor fuel constituent and that the American buyer rebels against having to take something he does not feel is the best for the price. The compulsory use of such fuels through legislation could do the cause more harm than good.

So, free of government help, the foundation believes the farmer will support the use of alcohol blends on the basis that he supplies a portion of the material going into the motor fuel and is thereby benefited.

The economics of the entire problem are to be worked out in the local plant and over a long period of time. No one can tell at this time what the answer will be. One thing appears sure, however, and that is if alcohol blends cannot compete with regular gasolines those in charge of the work will have made a determined effort to aid in the solution of this country's problem of expanding the consumption of farm products and will have lost several hundred thousand dollars in the experiment.

Alcohol concentration tower

WHAT IS CHEMICAL FOUNDATION?

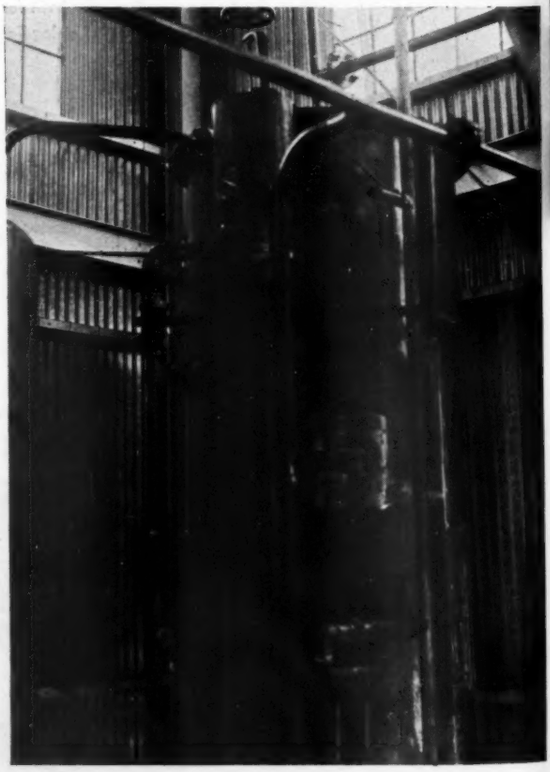
But one may ask, what is the Chemical Foundation, Inc., and why does it concern itself about promoting the consumption of agricultural products at the expense of the oil business? This could be answered in detail more fairly to the foundation, but here it might be simply stated that it represents the American chemical industry and sees in the utilization of farm products as raw material for the manufacture of merchantable goods the furtherance of its interests and, at the same time, the foundation believes it will aid the farmer and society generally. In this the foundation is supported by the Farm Chemurgic Council. There was no reason to offer competition to the oil industry except that the manufacture of alcohol for use as a motor fuel offered a large and expanding market, and to substitute farm production for a diminishing oil supply appeared to be a patriotic move.

Now we know, of course, that we may suffer a shortage of farm products as well as an over-supply of them, and we are also told in a recent geological report that our oil reserves are adequate to supply our needs for at least 25 years. Ten similar reports made over years gone by have each proved too conservative, and this one may also.

Roughly, the average value of farm products rises or falls 2 per cent for each 1 per cent difference in quantity produced below or above normal. In abundant years alcohol might be made to compete with gasoline, while in lean years that would be very difficult.

To stabilize farm product prices, some have suggested that the excess be stored and drawn upon when shortages occur. Others want the land taken out of cultivation or crops destroyed in abundant years, and in the lean years favor opening up new lands. In either instance the program is impracticable, as seen from actual experience.

Some proponents of the alcohol motor fuel say that we might adopt a third plan, and that we should carry on our agricultural production at a rate which would yield an excess at all times and any of the production which is not absorbed in the regular channels as food could advantageously find its way into alcohol plants to be made into



Decanter for purifying alcohol

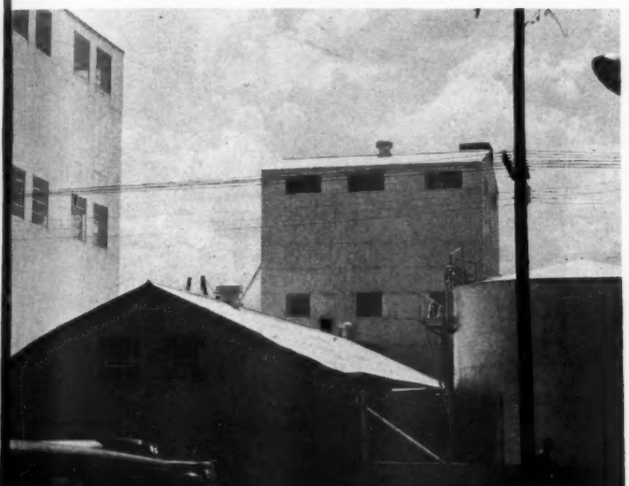
motor fuels and thus utilize the excess quantities.

In such a program the proponents of power alcohol contend that many more men could be employed on the farms and be self-supporting. They indicate that it takes from two to three man-hours to make a gallon of alcohol for each one-man hour taken to produce a gallon of gasoline.

START OF PROJECT

So with this before them, the Chemical Foundation about three years ago sent representatives into the agricultural regions of the Middle West to find a suitable location for an experimental alcohol plant. At Atchison, Kans., they found the idle plant of the Bailor Manufacturing Co., and while it was not originally designed to make anhydrous alcohol, it represented at least half of what was needed. An engineering survey was made to determine what old equipment could be used and what new equipment would have to be purchased to bring the plant up to the capacity and type wanted. A contract was given to the Acme Coppersmithing & Machine Co. to do the work, and the sum of $116,000 was advanced to Bailor by the Chemical Foundation, which money was to pay Acme for the new work. The advance was in the form of a loan, and if the plant is a success the amount will be paid back. If the plant is not a success, the foundation is the loser.

Up to the present time the plant has not manufactured a gallon of alcohol, but has on the grounds more than 40 workmen who will bring the various units into operation within the next month or two. The research laboratory has perfected the formulae under which it will market its



Exterior view showing still house, mill house and fermenters

"Agrol fluid," and the plant has received the full approval of the Alcohol Control department of the federal government in every detail.

The "Agrol" fluid to be marketed as the blending agent contains approximately 50 per cent ethyl alcohol and 50 per cent gasoline and, of course, the required denaturants. These denaturants have been selected and approved, and it is not possible for the motorist to separate out the alcohol by adding water. Any attempt to drink the ethyl alcohol contained in the mixture would cause violent vomiting because of the nature of the denaturants. contained in the mixture would cause illness because of the nature of the denaturants.

OPERATION OF PLANT

In the course of the experimental commercial scale operation of the plant, abundant farm products will be utilized as raw material as it is made available, and the cost of manufacturing alcohol from each commodity will be carefully tabulated. The plant is prepared to process corn, wheat, potatoes, artichokes, fresh fruit, and will take culled vegetables and spoiled fruits as they may be made available. In fact, every possible material offered by agriculture will be investigated. From each of these will come a certain quantity of ethyl alcohol, dry feed cake and carbon dioxide. These will be recovered and a market value placed upon them so as to determine the true cost of manufacturing the alcohol. Bailor might decide to install a solid carbon dioxide plant after the alcohol plant starts operating.

With grain at 60 cents a bushel as a normal market, it is believed that ethyl alcohol may be manufactured for 25 cents a gallon. Any difference in the cost of the grain would reflect an almost proportionate change in the cost of the alcohol, so, obviously, with corn at $1 a bushel or better, Bailor does not state that it can manufacture alcohol from corn for 25 cents a gallon. The cost will probably be nearly 40 cents a gallon, but no one knows.

SALE OF FLUID

In the sale of the "Agrol fluid," Bailor, as manufacturer, will sell the output of the 10,000-gallon plant to Chemical Foundation of Kansas Co. at a price covering the cost of production plus 2 cents a gallon. The Chemical Foundation of Kansas Co. will resell at a price guaranteed not to exceed 25 cents per gallon. This alcohol will be denatured and then blended with a petroleum in an equal volume fraction to make the "Agrol fluid."

At the present time the research laboratory of the plant is experimenting with various fractions of petroleum in hopes of finding a cut that will improve the antiknock and power qualities of the finished gasoline blend.

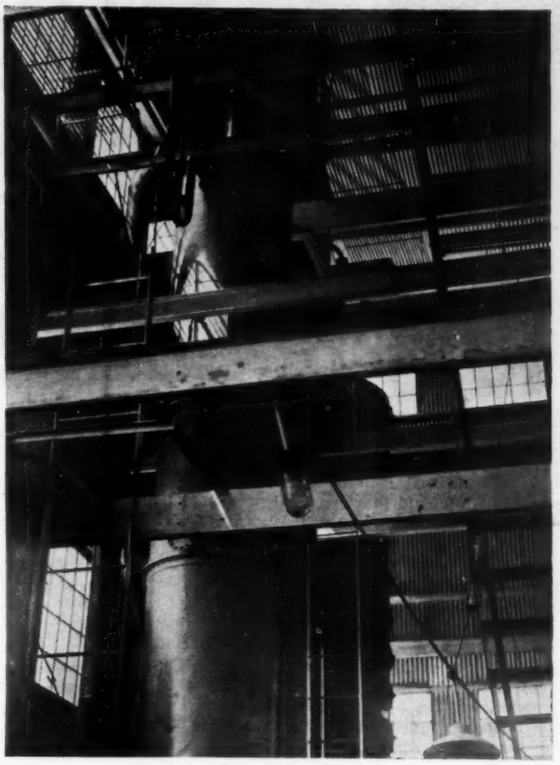
SUPERVISE SALE

For a period of two years after the sale of Agrol gasolines is started, the Chemical Foundation of Kansas Co. will supervise distribution of the motor fuels to insure their most advantageous use and to correct any imperfections in the product and sales service.

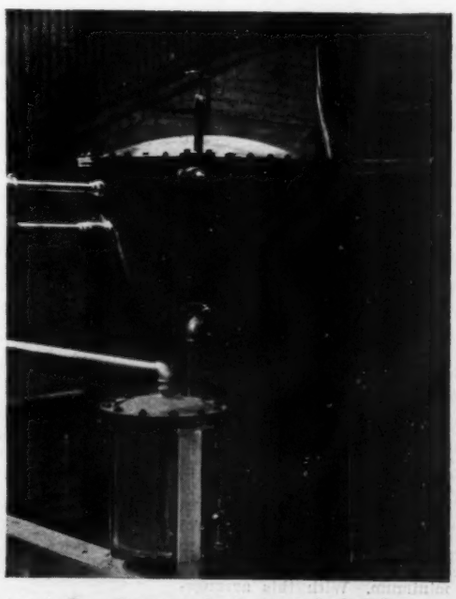
Distribution plants will be established in eastern Kansas, northwestern Missouri, in the eastern half of Nebraska, northern Iowa, southern Minnesota, South Dakota, and in the southern half of North Dakota. These will operate on a quota basis as sales of the product are expected to keep up with production at all times.

Although only the one product, "Agrol fluid," will be manufactured and sold, the filling station operator who buys it will be permitted to make and sell three grades of Agrol gasoline. These gasolines are to be known as Agrol 5, Agrol 10 and Agrol 15. The numbers indicate the quantity of alcohol in each of the three standard fuel blends when 60 octane Mid-Continent gasoline is taken as the base fuel. Agrol 5 has an antiknock value equivalent to a blend of 5 per cent ethyl alcohol and 95 per cent 60 octane Mid-Continent gasoline. Agrol 10 has an antiknock value equivalent to a 10 per cent blend of alcohol in 60 octane Mid-Continent gasoline, and so on. By this method even though the operator is obligated to maintain a certain standard of antiknock value in the Argol gasolines he offers for sale, he will be afforded flexibility in the choice of base gasolines which he purchases. If he wants to make Agrol 10, he may buy a 58 octane base fuel to which he would need to add more Agrol fluid than had he purchased 60 octane, and, similarily, if he purchases a gasoline having an octane number above 60, he would need less Agrol fluid.

Roughly figured, the antiknock value of the base fuel is raised one number for each 1 per cent of alcohol added to the 60 octane base fuel. Thus, as an example, a marketer in Omaha might figure his relative costs somewhat as follows: Assuming that he must pay 25 cents for the alcohol at the Atchison plant, in the form of Agrol fluid. To this must be added the 1-cent freight charge to bring it to Omaha. This brings the delivered cost of the alcohol to 26 cents. On today's market the delivered cost of 60-octane refinery gasoline there is about 7¼ cents. If nine parts of this fuel are blended with one of alcohol, the resulting 70-octane blend costs 9⅛ cents. Regular 70-octane refinery gasoline is selling there for about 8½ cents. Large quantities of gum-solvent refinery gasoline is selling in that area for 9½ cents or at 1-cent premium over ordinary 70-octane gasoline, and because the alcohol blend would fall in this classification, the marketer might be attracted to the alcohol blend and the potential competition made real.



Alcohol concentration columns



Drum for separating water and alcohol

Devise New Type Pressure Control for Vacuum Tower

Dr. M. R. Fenske, of Pennsylvania State College, has devised a low-pressure tower arrangement which is said to surpass all previous vacuum controls in distillation of petroleum. Dr. Fenske, who is director of the refining laboratories, has assigned his patent on column pressure control to a unit of the Pennsylvania Grade Crude Oil Association.

The temperature of a boiling liquid, influenced by the pressure exerted on the liquid, controls the pressure of the system. Following the accompanying diagrams in the words of the patent presentation, Dr. Fenske says: "Many devices for the control of pressure respond directly to the pressure under control. To operate such devices a certain pressure differential is required which remains substantially constant regardless of the pressure. When dealing with extremely low absolute pressures, for instance pressures of the order of one millimeter of mercury, this pressure differential becomes of relatively large magnitude compared to the pressure under control, the result of which is that the regulation becomes extremely poor and the results are generally unsatisfactory.

BETTER CONTROL OBTAINED

"To overcome these shortcomings of prior art," Dr. Fenske says he has devised a control which responds to the temperature of a boiling liquid, the boiling temperature of which is a function of the pressure under control. Since the boiling temperature of a liquid changes rapidly with small changes in pressure, particularly at very low pressures, a relatively large temperature differential is afforded with minute changes in pressure with the result that an extremely satisfactory regulation is obtained.

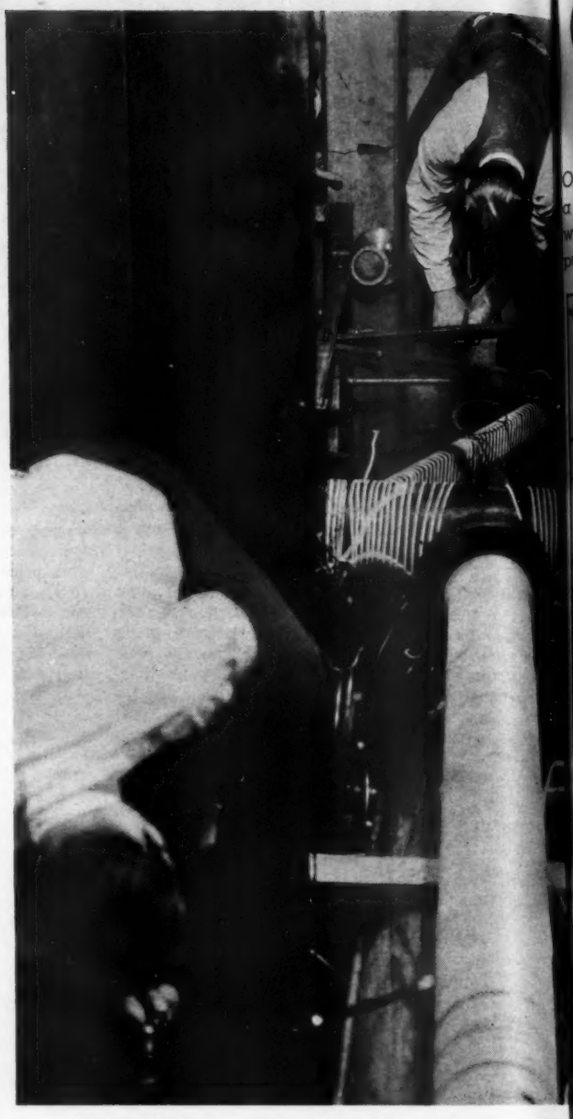
In the accompanying diagram the figure 10 refers to a flask containing a liquid, 11. At the top of the flask, 13, is a condenser which refluxes the liquid 11. The figures 14, 15 and 16 represent the means of applying heat energy to the flask. The flask has an opening, 17, which is connected to the low-pressure line, 18, which is in turn connected with the vacuum pump, 19. The device responsive to the heat of liquid 11, is in this case a mercury temperature controlled switch shown at 20.

The valve, shown at 23, is controlled by the mercury heat controlled device. This valve is provided with a by-pass, 25, and adjustment, 26, so that provision is made for a minimum continuous flow from line 18 to the vacuum pump. This minimum flow is adjusted so as to be below the demands of the system caused by natural leakages or otherwise. Control 27 is adapted to open and close to control the flow above this minimum. With this arrangement relatively abrupt changes in pressure in line 18, due to the opening and closing of valve 23, are minimized. To further even out changes in pressure a cushioning tank, 28, is inserted in line 18.

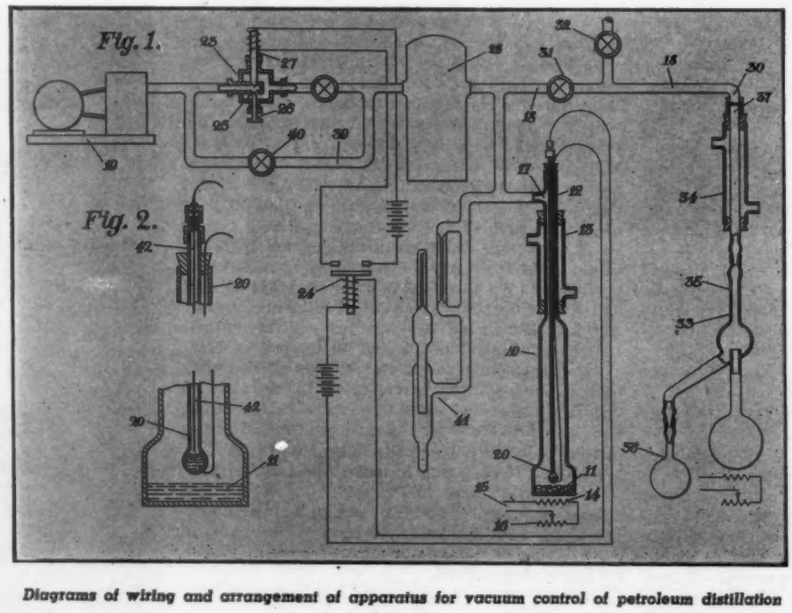
"Liquid 11," says Dr. Fenske, "is preferably of a high degree of stability and of a constant boiling temperature . . . I find that diphenyl methane is very satisfactory. Switch 20 closes in response to a rise in temperature of liquid 11, due to a rise in pressure in line 18. This in turn closes the output circuit of relay 24, causing control member 27 to open. As the pressure in line 18 and flask 10 decreases the temperature of liquid 11 also decreases and switch 20 opens. This in turn will open the output circuit of relay 24 to allow control member 27 to close. Upon a rise in pressure in line 18 the cycle is repeated.

"For the rapid initial evacuation of line 18 and any connected apparatus a large capacity by-pass, 39, around valve 23 may be provided. Valve 40 is closed when the desired pressure is approached. An absolute pressure gauge is shown at 41. To control the pressure at any desired point it is merely necessary to adjust the movable contact 42 of switch 20 and check the results on the gauge 41."

The past few years has seen a decided trend in the direction of using higher vacuums on fractionating towers for the manufacture of overhead cylinder stocks. As a result heavier lubricating fractions are now recovered in greater volume and subsequent treating and filtering costs are reduced because of the lighter color of the overhead produced. The utilization of vacuum equipment is of special value when manufacturing lubricants since any trace of cracking during the distillation, caused by excessive heat, renders the lube stock unfit for marketing by lowering the flash point of the oil. When this occurs, expensive redistillation is necessary. Therefore, by using higher vacuums the distillation temperature is lowered.



Winding fractionating column for electrical heat input during close fractionation, under vacuum, of lubricating stocks



Diagrams of wiring and arrangement of apparatus for vacuum control of petroleum distillation

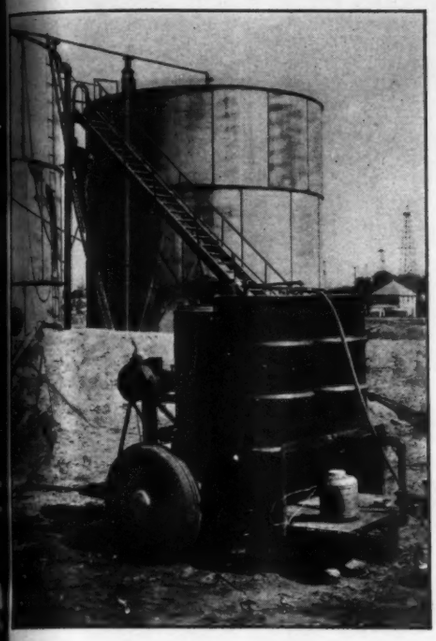
Committee Change

G. Raymond, of Black. Sivalls & Bryson, Inc., Oklahoma City, Okla., has been appointed chairman of the manufacturers' sub-committee on bolted tanks of the American Petroleum Institute's division of production to succeed William Schwemlein, of Parkersburg Rig & Reel Co., Parkersburg, W. Va., resigned. Mr. Schwemlein will continue as a member of the committee, which now is engaged in preparing standards for the stairways and walkways on bolted production tanks.

OPERATING IDEAS

Portable Cleaning Machine

One Oklahoma City contractor has devised a small steam cleaning machine, equipped with a small vertical steam boiler and steam pump, and mounted on a two-wheel trailer.



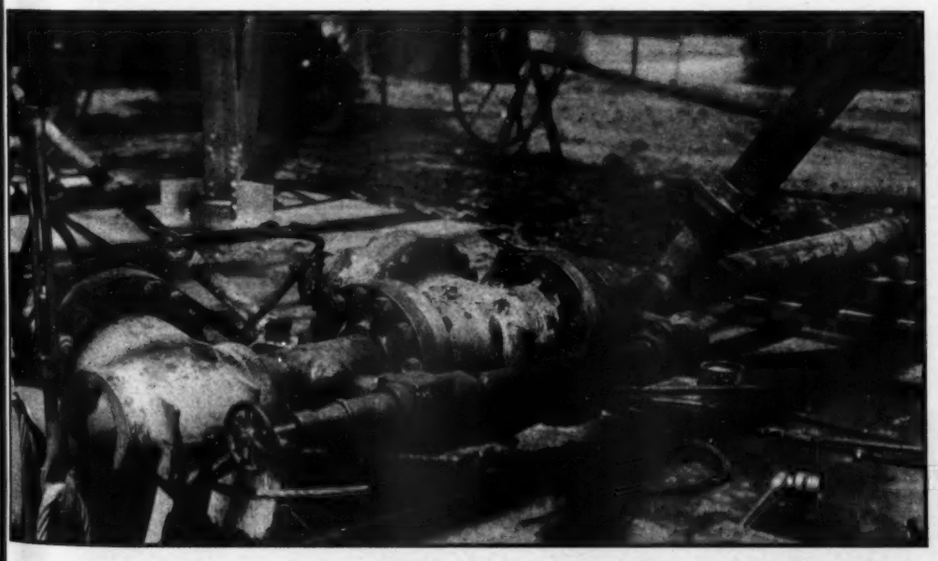
A steam pressure of about 70 pounds is held on the boiler, the pressure being sufficient to spray the cleaning chemicals upon the surface to be cleaned. One man can thoroughly clean a battery of tanks in four hours with this equipment so that much time is saved by its use. The machine cleans the tanks very thoroughly and is not accompanied by the fire hazard involved in the use of gasoline. The contractor also uses this equipment for cleaning engine houses and derricks.

Screen Covering for Circulating Tank

To prevent leaves or debris from falling into the water circulating-tanks, one operator in the Bradford, Pa., field covers the tops of his open tanks with one-quarter inch wire screening. This prevents the lines from becoming clogged with trash and is of especial value when tanks are located near trees. The wire is supported by cross-braces in the tank.

By-Pass Installed on Main Gate of Flow Line

Several times in the past few weeks blowouts have occurred at wells in the north extension of the Oklahoma City field. In order to reduce the possibility of future blowouts, all operators are installing by-passes, made of 2-inch pipe, around the main gates of the flow lines. A choke is also installed in the by-pass line. For producing the daily allowable the main gate remains closed and the well is produced through the choke. These devices have proved to be both economical and highly satisfactory, since before their installation the large amount of sand produced with the oil would rapidly erode the gate of a partially open valve.

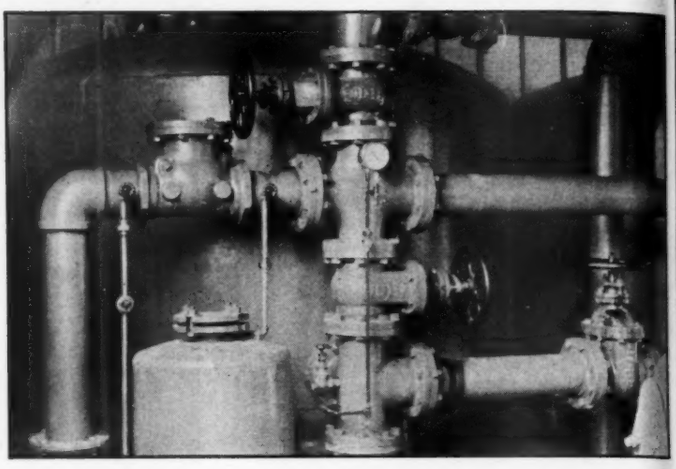


Grease-Rack From Old Pipe

Another use for old worn-out casing is shown in the accompanying photograph. A section of 10- or 12-inch casing can be easily cut in two and made into a washing and greasing rack as has been done at one of the major company camps in the Ranger district of Texas. It will be noted that sections of small pipe (tubing) has been welded onto one side of the casing to help give strength to the approaches and also to help prevent the wheels of the cars from climbing off the insides of the approaches. The rack is substantially braced with sections of pipe saddle-welded to the approaches and rack.

Modern Practices Followed in Bradford Field Flood Project

By T. P. SANDERS

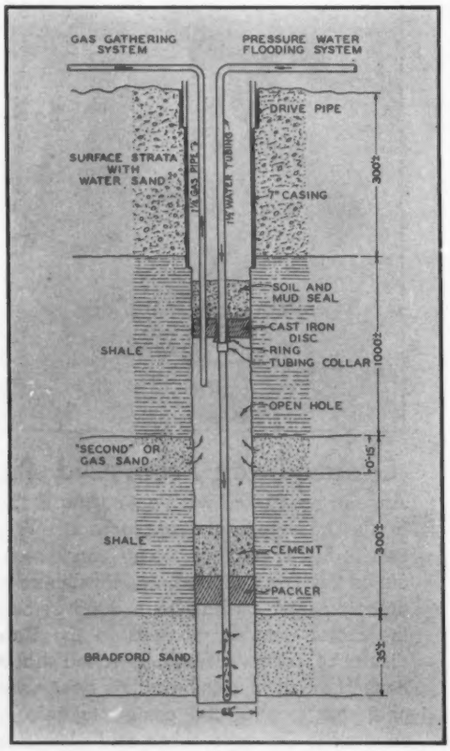


Filtering equipment used for removing suspended materials before the water is pumped to the input wells

In the Bradford field of McKean County, Pa., an old 60-acre oil-producing lease was recently purchased by a firm of geologists and petroleum engineers in Bradford with the intention of further producing the property by the water-flooding method. The procedure they have undertaken to develop the water-flooding project is in keeping with the better methods practiced in the Bradford field.

On the eastern 30 acres all of the wells have been completed, both input and producing wells, while on the western 30 acres the work has just been started. Sixteen irregularly spaced oil wells were drilled by the original owner of the lease between the years 1890 and 1915. At the time the lease was acquired these wells were equipped with pneumatic heads operated by compressed air piped from a central compressor station. Due to uncertain profits the lease had been operated intermittently for several years, and had finally been shut down entirely for nearly a year before its sale.

The first consideration for the water-flooding project was the pattern of the locations of input wells and producers. Following the general field practice the "five-spot" plan was adopted. By this method each producing well is in the center of a square, the corners of which are occupied by input water wells. Water wells were drilled along the edges of the lease 250 feet apart extending across the lease. Thus, all of the water wells are 250 feet apart, and the oil wells drilled in the five-spots are also 250 feet apart. The old wells were cleaned out and equipped for pumping by rod lines from the new central power along with the new wells.



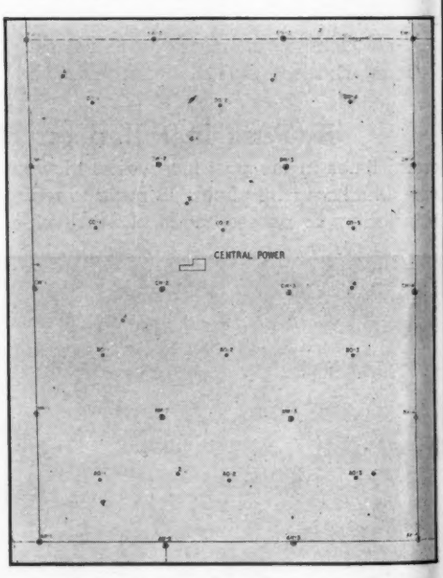
Input water well in the Bradford field equipped so that gas can be produced from the upper sand while water is forced into the Bradford sand

Cable tools were used to drill both the water wells and the oil wells. The entire section of the Bradford sand was cored with cable tool core bits and barrels. The section has been cored in many wells with a diamond drill. In that case the hole is drilled to the top of the sand with cable tools; then the diamond drilling equipment moved over the hole and a diamond drill core taken of the Bradford section. The well is then reamed to the bottom.

Coring with diamond drills is more expensive, but the recovery is generally close to 100 per cent. Some operators object to its use, claiming that the high pump pressures will wash out part of the oil in the cores causing incorrect saturation tests. However, if the core is broken horizontally it can be seen by a ring in the core that the water has only penetrated about one-quarter of an inch in most cases. Therefore, if the test specimen is cut so as not to include any sand near the edge of the core, the accuracy should not be affected. Because of the additional cost of diamond coring, it is considered good practice to use this method only occasionally as a check against the general accuracy of cable tool coring work.

The cores are taken to the laboratory where tests are made for permeability, porosity, and saturation. The results are recorded and both the cores and records are kept for reference. Permeability is of prime importance in water-flooding and fairly uniform permeability throughout the sand section is greatly desired. The Bradford sand is extremely tight from top to bottom in the average well. Some wells, however, have streaks where the permeability is as high as 270 millidarcys instead of the usual permeability of less than 22 millidarcys. In cases of this kind, unless this condition is overcome, the flooding water will all follow the permeable streak and leave the remaining part of the sand virtually unchanged. It is primarily for the detection of conditions of this kind that cores are taken and tested. The correction of these unfavorable sand conditions is attempted, with varying degrees of success, by cementing off the loose strata or by avoiding shooting this section when the rest of the sand section is shot. Both oil and input wells are shot in the Bradford field when being completed. Common practice is to use 2 to 3 quarts of liquid nitroglycerine per foot of pay sand. The average thickness of the Bradford sand in the producing area is 35 feet, so that the size of shots are usually from 75 to 100 quarts.

In drilling water wells on the lease under discussion, the almost complete absence of casing left in the hole is a striking feature, at least to western operators. During the drilling about 20 feet of drive pipe is commonly set. Then about 300 feet of 6⅝-inch casing is set through the water sands to the top of the shale. After the hole has been completed through the Bradford sand, shot and cleaned out, a full string of 1½-inch high-pressure water tubing is run. The flood packer is installed on this tubing and set in the open hole just above the sand. Cement is then run in on top of the packer. On this lease 25 sacks of cement were used in each well. This is more than the usual quantity, which varies between 8 and 25 sacks.



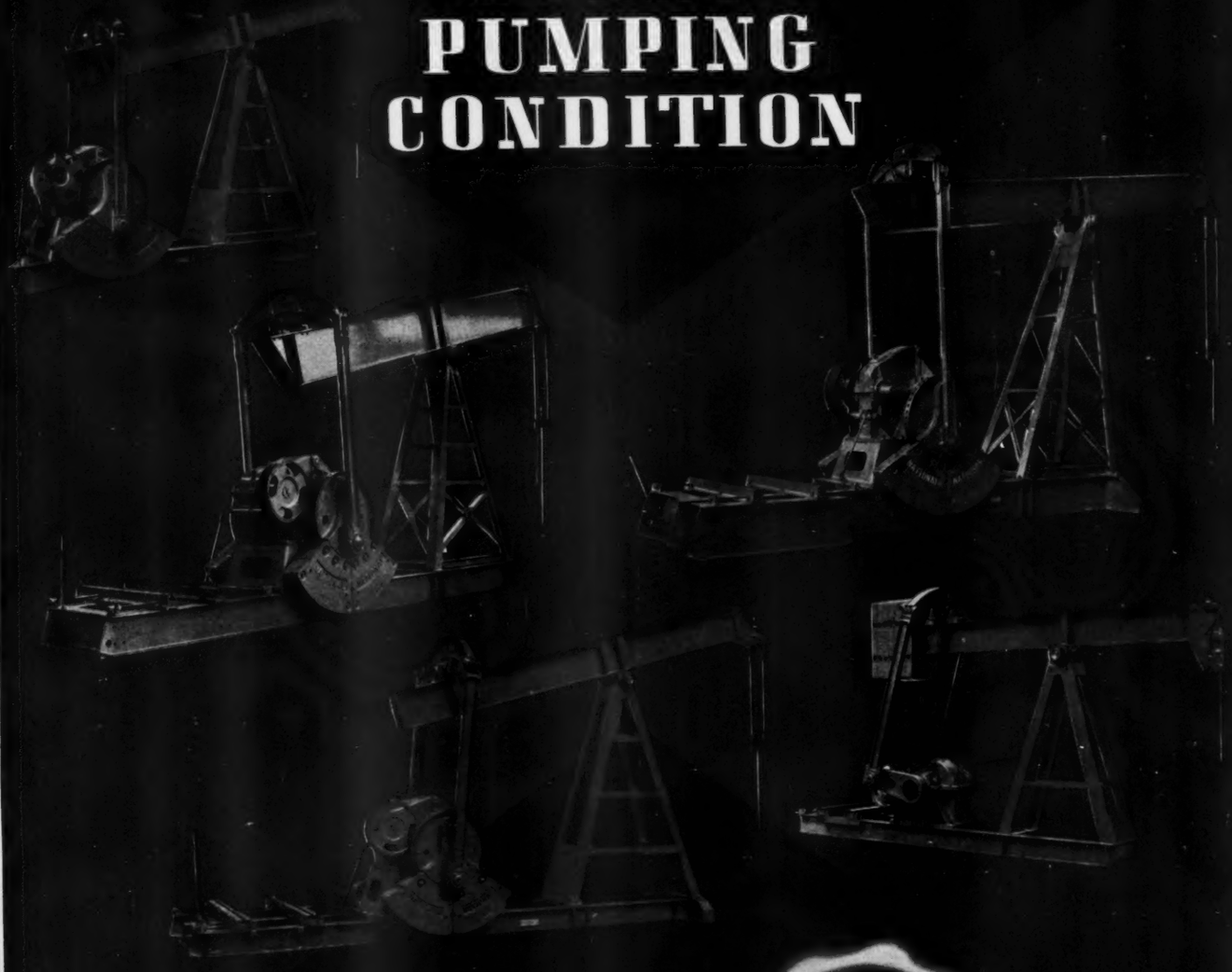
Plat of the eastern 30-acre lease now under water-flood, showing the 7 old oil wells, the 12 new oil wells and the 20 that were drilled for water input

In many parts of the Bradford field a sand

UNIT PUMPERS

A TYPE AND SIZE TO MEET

EVERY PUMPING CONDITION



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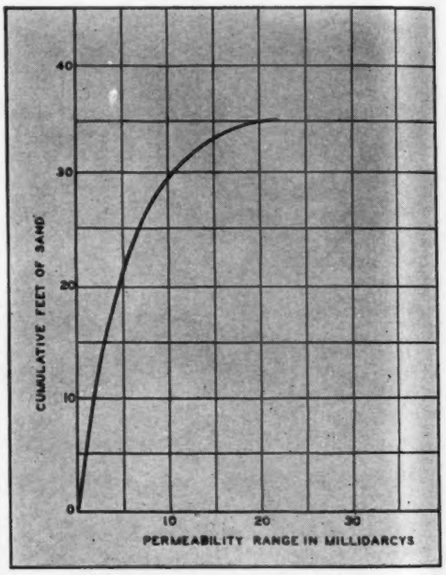
containing gas is found about 300 feet above the Bradford sand. This is known as "the second sand" and is present on the lease under discussion. Gas has become rather scarce in this area; none is sold, and during the cold water there is sometimes insufficient gas on some leases for lease operation. For this reason the gas from this upper sand was introduced into a gas gathering system, where it mixes with the gas from the producing oil wells. This was done by installing a cast-iron disk on the water tubing, above the gas sand, to act as a packer between the water tubing and the wall of the open hole. A string of 1¼-inch pipe conducts the gas through this disk and to the surface where it enters the gathering system.

The steps necessary in installing the disk begin with the installation of a tapered ring on a joint of the water tubing at the time it is run. This can not slip over a tubing collar, and is run on a joint whose position in the well will be a short distance below the bottom of the 6⅝-inch casing. The cast iron disk is then run into the well on the 1¼-inch pipe which screws into an off-center hole. A larger hole in the center of the disk permits it to slip down over the water tubing but is stopped when it fits over the tapered ring previously installed on the tubing. Since the cast iron disk fits rather loosely in the open hole, it is necessary to drop in rocks, soil, and finally mud to effect a water seal. When



Graph showing permeability range of the Bradford sand in a typical Bradford well. Sand with a permeability of 2 millidarcys or less is considered impossible to flood

this is accomplished the 6⅝-inch water string is pulled, leaving only the drive pipe in the hole. On top of this a wooden box is built which keeps soil from falling into the well and protects the water connection from freezing in winter.

The new operators of this Bradford lease were fortunate in finding what appears to be a good water supply at a depth of 230 feet. Water is usually hard to find in sufficient quantity in the Bradford field, and most of it used for flooding is purchased from the Petroleum Reclamation Co., who operate a 20-inch water line from the Allegheny River. Water is pumped from the 230-foot well with an electric deep well turbine pump. In order to decrease the load on this pump, a small electric centrifugal pump forces the water up a hill and into a large tank near the pressure station. A small circulating pump draws it from this tank through the filters and discharges it into a tank for filtered water. From here it goes to a large, triplex plunger pump, driven by a gas engine and capable of 1950 pounds discharge pressure, which forces it into the water input wells. The total discharge of the large pump is measured by

an orifice meter, and each well is equipped with a small water meter.

The water supply was tested for organic substances, among other tests, but none were discovered. Where organic materials such as various algae, crenothrix, and spirogyra are present and remain active after passing through the filter, by the time the water reaches the oil sand it carries materials which may clog up the face of the sand. Very recently a method has been devised to correct this condition and keep the water clear after passing the filter. By this method chlorine is added to the water at the filter, thereby killing the organisms.

The filter used on this lease is made up of several sizes of rock and sand. In some filters finely divided anthracite coal is being used instead of the fine sand. Alum is used in the filter to coagulate the silt particles so that they will not pass through. A good water treating plant usually costs less than one input well and acts as a safeguard for many such wells.

The wells on this lease are pumped by straight-lift jacks actuated by a central power. The power consists of a bandwheel power set at a steep angle, to conform with the slope of the hillside on which most of the lease is situated, and a 60 horsepower gas engine.

Metal Corrosion Problems to Be Discussed at Meeting

A remarkable symposium on corrosion resistant metals in design of machinery and equipment will be held as part of the American Society of Mechanical Engineers' annual meeting in New York City, November 30 to December 4. The information presented is to be in compact form, of a practical nature, free from lengthy theoretical discussions but still sufficiently complete that when the different papers are assembled they will form a handy reference for the engineer of the subject of corrosion resistant metals.

The need for such a symposium was expressed by designing and operating engineers of the country who are constantly confronted with many problems on corrosion. They are busy men and not many of them have been able to follow closely the rapid development of this type of information during the past few years. Several of the professional divisions of the society joined in developing the symposium making it a feature of the A.S.M.E. annual meeting where it has been allotted the whole day of Thursday, December 3.

Several methods of presentation had been considered to present the material but the most feasible appeared to be according to the different base metals.

The papers to be presented are as follows:

Introduction to Corrosion Resisting Metals—Dr. F. N. Speller, National Tube Co., Pittsburgh, Pa.

Alloys of Aluminum—E. H. Dix, Jr., Aluminum Co. of America, New Kensington, Pa.

Nickel and Nickel-base Alloys—F. L. LaQue, The International Nickel Co., Inc., New York, N. Y.

Zinc in the Chemical Industries—E. A. Anderson, The New Jersey Zinc Company, Palmerton, Pa.

Lead—G. O. Hiers, National Lead Co., Brooklyn, N. Y.

Cast Iron in Chemical Equipment—Dr. H. L. Maxwell, E. I. du Pont de Nemours, Co., Inc., Wilmington, Del.

Copper and Copper-base Alloys—R. A. Wilkins, Revere Copper and Brass, Inc., Rome, N. Y.

Corrosion Resistant Steel (Stainless Type)—J. H. Critchett, Union Carbide and Carbon Research Laboratories, Inc., New York, N. Y.

Joins Pennsylvania State Staff

Dr. Sylvain Pirson is now in charge of work in the petroleum and natural gas industries at the Pennsylvania State College, College Station, Pa., according to an announcement made by the college officials. Doctor Pirson has had considerable experience in Mid-Continent fields and acted as instructor for one year at the Colorado School of Mines. Prior to joining the Pennsylvania State staff he was employed by the Gulf Research & Development Co. of Pittsburgh.

This picture shows you

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The MacClatchie is the only Wall Scraper with circulation practically closed until blades are open to the point where the additional weight from the string is certain to fully expand the blades.

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Another decided advantage of the MacClatchie Wall Scraper is that it has circulation at each cutter and circulation at the pilot bit.

The MacClatchie Wall Scraper is a modern tool for the modern job of: Scraping mud from production sands, enlarging production areas, and enlarging for better cement jobs.

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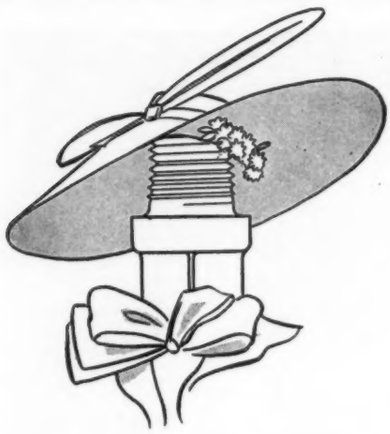
THE SMART SUCKER ROD MOTIF OF THE MONTH



A H--l of a caption for any sucker rod manufacturer to put on his advertisement! That's what you are thinking, and we don't blame you.

Axelson, however, believes in consistency. If our salesmen are going to talk it, why shouldn't we advertise it?

Seriously, though, we have lost faith in any policy of monthly sucker rod motif! We seriously believe that with very few exceptions all oilwells using pumps and sucker rods fall into three general classifications. By this same token we are inclined to question the advisability of making more than one sucker rod to meet each specific pumping condition, as reflected in three classifications.

Engineers of sucker rod manufacturers and oil companies alike have labored during past years toward uniformity of thread, uniformity of upset, length and size in all sucker rods. Truly constructive work has been done in mechanical standardization, beneficial to both buyer and seller.

In the same manner Axelson believes that standardization can profitably be carried on in the material characteristics of sucker rods. Today sucker rod manufacturers adhere strictly to *mechanical standardization*, but seem to be going far afield in any attempt at constructive *material properties standardization*.

Axelson feels that this situation is unhealthy for all branches of the oil industry. It is one on which someone must make a stand — that is just what Axelson is doing. Backed by an experience of forty-four years in the manufacture of pumps and sucker rods, Axelson's analysis of sucker rod manufacture and use indicates a rod for each of the three general classes into which pumping may be grouped.

We recommend for the Industry's consideration a policy of sucker rod materials standardization as reflected in these specific types:

●

A First Rod *of high quality, moderately priced for use in light and reasonably heavy pumping operations.*

A Second Rod *of excellent quality, with high tensile, high ductile characteristics which meets reasonably-heavy, heavy and extra-heavy pumping conditions.*

A Third Rod *combining the best features of the Second, but with the added advantage of meeting conditions in wells where corrosion constitutes a problem.*

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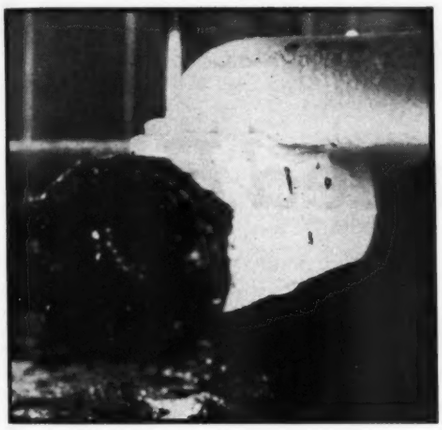
OIL WELL PUMPS **AXELSON** SUCKER RODS

Drillers Said It Was "Air" Pocket, But It Ruined the Derrick

By L. G. E. BIGNELL

Tangled mass of steel derrick and 3-inch drill stem after blow out at New Mexico well

The accompanying picture is not of a spider web but was recently taken at a well in the Eunice field, New Mexico, after the drill stem was blown out of the hole and wrecked the derrick. Drilling at depth of about 2,000 feet in the potash-salt formation, a pocket of high-pressure "air" was encountered which blew the drilling fluid and drill stem out of the hole and cleaned the pocket in less than five minutes. Some idea of the pressure may be gained by considering the



Frost accumulated on exhaust of engine operated by "air" in Ida field, Texas

fact that the pop valves on the slush pumps set for 1,500 pounds per square inch were unseated as the rush of gas blew up the drill pipe and through the rotary hose back to the slush pumps.

Pockets of "air" have been frequently encountered while drilling in the salt beds in the various fields in southeastern New Mexico. This gas is noninflammable and is quickly exhausted. It leaves the hole so quickly, in fact, that no representative sample has ever been caught so that an analysis could be made, but it is believed to be composed mostly of nitrogen.

In the Ida field, Scurry County, northeast of Westbrook field, Texas, noninflammable gas was found at 1,145 to 1,165 feet and again in a strata at 1,360 to 1,375 feet, which was under a pressure of about 125 pounds and of large volume so that samples were secured and analyzed as follows:

	Per cent
Nitrogen	93.2
Methane	4.6
Ethane	1.7
Carbon dioxide	.5
Total	100.0

There was a sufficient volume of this gas in the Ida area to permit drilling contractors to use it to run their "steam" engines during drilling operations. It was common practice there to partially bury a 40-horsepower steam boiler in the sandy soil and fill it about two-thirds full of oil and connect through Bradenhead on the 10-inch casing to the gas strata and fill the boiler with this inert gas during the night, building up a pressure of about 110 pounds. During the daylight tour a 10x12 Ajax drilling engine would be run from this accumulated gas plus the gas produced during the shift permitting the engine to be run until the boiler pressure dropped below 90 pounds.

It is reported that these "air" pockets are found at varying depths between 1,300 and 2,700 feet in the potash-bearing salt series in many parts of the West Texas-New Mexico area. Thin anhydrite members and very thin layers of red and gray shale are interbedded in the salt. Potash in the form of polyhalite is a plentiful constituent. Potash is being mined about 30 miles to the west of the Eunice field.

At this well 35 feet of 10¾-inch surface casing was set and cemented. Also a string of 7⅝-inch casing 1,250 feet long is set and cemented to the surface. Out of this second string the hole is 6¾-inch diameter and the drill pipe used was 3-inch diameter. Cone bits were also used in drilling this hole. The usual hookup for rotary was used on this well with a steam rig and 122-foot high steel derrick mounted on 6-foot foundations.

SALT ADDED TO DRILL FLUID

When a depth of about 2,040 feet was reached the air pocket was encountered and the air blew back through the drill stem and up in the annular space between the drill stem and casing and cleaned the hole in less than five minutes. The drill fluid used at the time of blowout was water partially saturated with salt. This is common practice in drilling the salt beds of New Mexico as it has been found that fluid of this kind will not dissolve any great quantity of salt from the formations and create caverns.

It is true that any drilling fluid will eventually become saturated with salt in drilling through the salt beds, but to prevent the upper 100 feet of these beds from giving up any appreciable quantity of salt the fluid is premixed with rock salt secured from the nearby potash mines. This salt costs about $6.50 per ton delievered at the well and about 5 tons are dumped into the two 15′ by 80′ by 2½′ deep slush pits when they are ready to drill the salt section.

These slush pits will hold about 4,500 cubic feet of fluid, but are about 75 per cent full, so that the 5 tons of salt are mixed with about 209,250 pounds of water, making a 4.8 per cent mixture. As the 6¾-inch hole is drilled the 700 feet into this salt bed an additional 23,437 pounds of salt will be removed and added to the fluid plus such salt as may go into solution during the drilling operation.

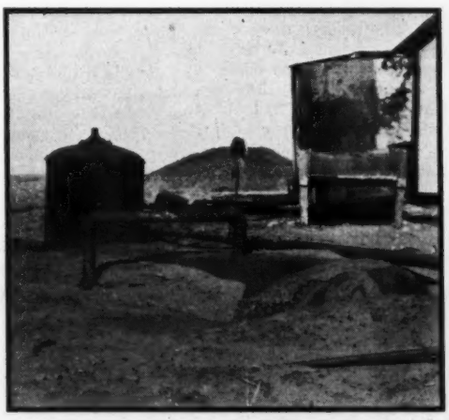
This will make the specific gravity of the drilling fluid approximately 1.1758, or it will exert a pressure of about .509 pounds per foot of height, or for the 2,000 feet of hole the pressure exerted at the bottom would be about 1.018 pounds per square inch.

When the crew noted the gas was blowing out at the slush pumps the first impulse was to shut the blowout preventer on the drill stem, but this could not be done for the stem was already moving upward at high velocity and had broken loose from the lower end of the Kelly stem. This Kelly stem was not damaged in any way and was used again as soon as the derrick was replaced.

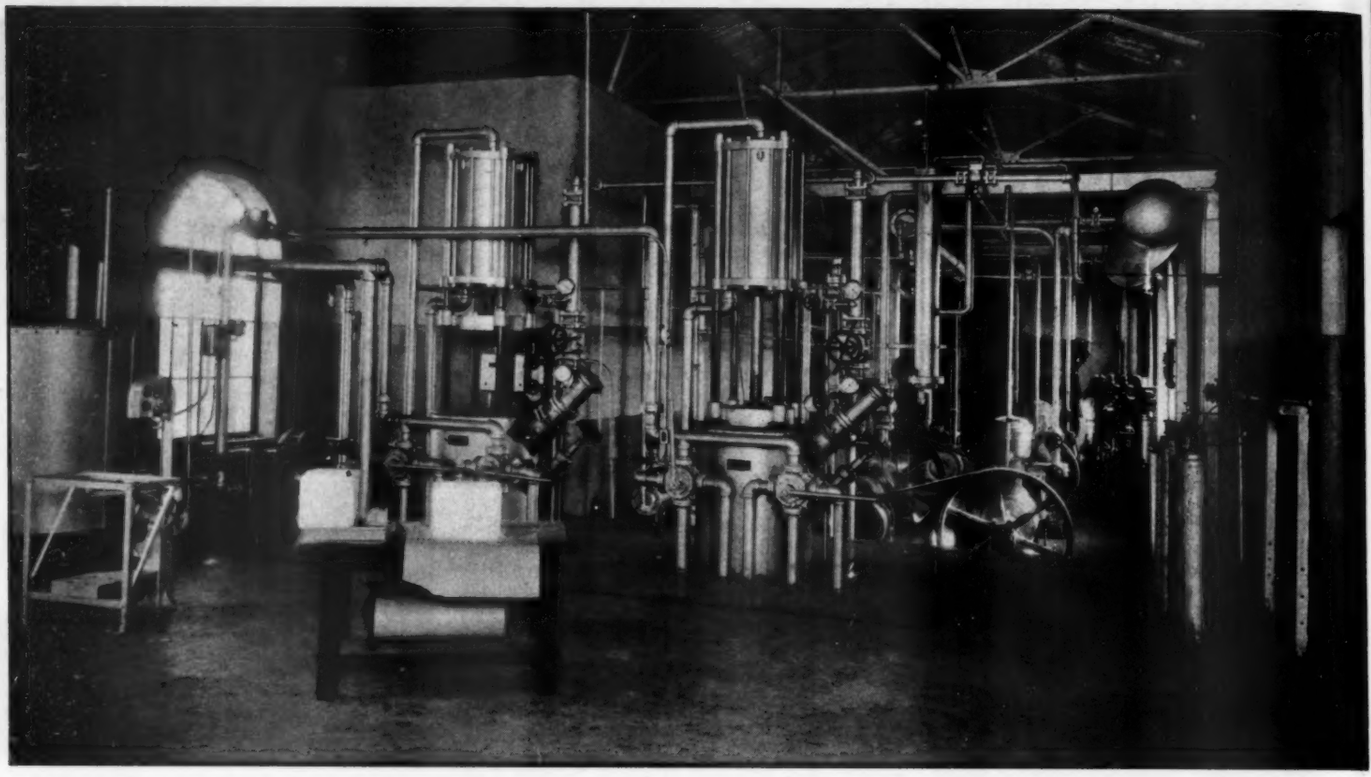
As the drill stem left the hole it bent in different directions and was threaded through the derrick. One section of pipe hit the leg at about the sixth section and sheared the bolts and the derrick then folded over on the opposite side until the crown blocks just about touched the ground. After this the drill stem continued to come out of the hole and wind itself through the derrick until it was above the surface, and the well kept on blowing for a few minutes longer and then quit.

This all happened so fast that a crew on the next well did not reach the well in time to be of any assistance even though they started when the first explosion took place and they noted something wrong on No. 1-C Orcutt.

When the blowout was over the crew started to clean up as soon as they could. The derrick and drill pipe was removed from the location and a new derrick erected. New drill pipe was secured and when it arrived drilling was resumed at the point where the blowout occurred and no further trouble was experienced.



Old boiler used as an accumulator at drilling well in West Texas field



Interior of the Pacific Imperial Dri-Ice Co. plant at Niland, Calif., where gaseous carbon-dioxide is processed to form dry-ice or solidified carbon dioxide. Two blocks of dry-ice are shown on the table in the immediate foreground

Carbon Dioxide Produced From Gas Wells Used as Refrigerant

By L. P. STOCKMAN

Production of carbon dioxide gas and manufacture of dry ice by compression of the natural gas is becoming an important factor in the extreme southern part of California and if this industry continues to expand as it has during the past year it should ultimately become of considerable economic importance. There is at the present time a dry ice plant near Niland operated by the Pacific-Imperial Dri-Ice Co., and another similar installation of the National Dry Ice Co., near Mundo, about 4 miles west of Niland. The National Dry Ice Co. recently secured a lease from the Imperial Irrigation District on 2,000 acres of potentially productive land and present plans call for immediate drilling.

The gas produced as a result of development work in this district is almost pure carbon dioxide, as there are no hydrocarbons present and practically no inert gas. An analysis of this gas by Smith-Emery Co. shows carbon dioxide (CO^2), 99.966 per cent; sulfur dioxide (SO^2), none; hydrogen sulfide (H^2S), none; inert gas, .03 per cent, and residue .004 per cent. The wells producing carbon dioxide gas in this area are approximately 750 feet in depth and are drilled with a light portable drilling outfit. The pressure is not high enough to necessitate the installation of high-pressure fittings and consequently the flow lines are hooked up directly with the producing string of casing in the well by using either an elbow or a T.

The first commercial carbon dioxide gas well was started September 25, 1932, and drilling operations undertaken on the second well October 10, 1932. The third well was started March 3, 1933, and with the development of a sufficient amount of carbon dioxide gas to justify the installation of a dry ice plant, construction was immediately started on an experimental unit in 1933. This work was done by Pacific-Imperial Dri-Ice Co., manufacturers of liquid and solid carbon dioxide. The carbon dioxide gas comes direct from the wells under pressures ranging from 100 to 250 pounds. The gas as it comes from the wells is warm but not hot and is moved into the dry ice plant through 4-inch welded pipe lines laid on the surface. Pacific-Imperial Dri-Ice Co., has 10,000 acres of potentially productive gas land under lease adjacent to the manufacturing plant and consequently compressing facilities will be substantially enlarged as soon as drilling operations and development work justify such expansion.

DRY ICE PLANT

Following completion of the experimental plant in 1933, a series of exhaustive tests to take the bugs out of the process were conducted until the spring of 1934. The present commercial plant of the Pacific-Imperial Dri-Ice Co. was started May 1, 1934, and completed November 4, 1934. It is the largest, best equipped and most modern plant of its kind west of the Mississippi River. There are still a few economic problems to be worked out as this area is 250 feet below sea level and because of extreme summer heat running as high as 125° F.

The Pacific-Imperial Dri-Ice Co.'s plant is located approximately 5 miles southwest of Niland, 1 mile from the mud pots or salses mentioned above and 5 miles east of the lower end of the Salton Sea. This plant is powered with a Cooper-Bessemer marine type vertical 6-cylinder 4-cycle mechanical injection full diesel oil engine of the water box type equipped with removable cylinder liners direct connected to a 275-KVA General Electric generator with extra weight flywheel generating 440 volts, 3-phase 50 cycle. Lubrication is force feed throughout. The engine is 11 by 14-inch stroke with a normal rating of 300 horsepower at 350 r.p.m. The compressors and all equipment are driven with V-belt drive direct connected to 25- and 50-horsepower motors. The General Electric pumps are driven with 20-horsepower motors and the switchboard has a generator panel and four feeder panels with circuit breakers.

Before the carbon dioxide gas enters the manufacturing plant it is run through an inclined water trap and thence through a vertical combination trap. In order to insure freedom from water the incoming gas is then run through a calcium chloride dryer, which is cleaned and replaced every three or four days. A water white, ordorless and tasteless mineral oil is used and two oil traps are utilized to prevent contamination of the dry ice from oil used in the compressors. The gas is then put through a 5¾ by 7-inch carbon dioxide compressor, where it is compressed to 400 pounds and then liquefied in eight stands of ammonia cooled condensors in a specially housed ammonia room, from which it emerges as a liquid at 5 degrees below zero, Fahrenheit. The liquid is then cooled down in carbon dioxide coolers to 40 degrees be-

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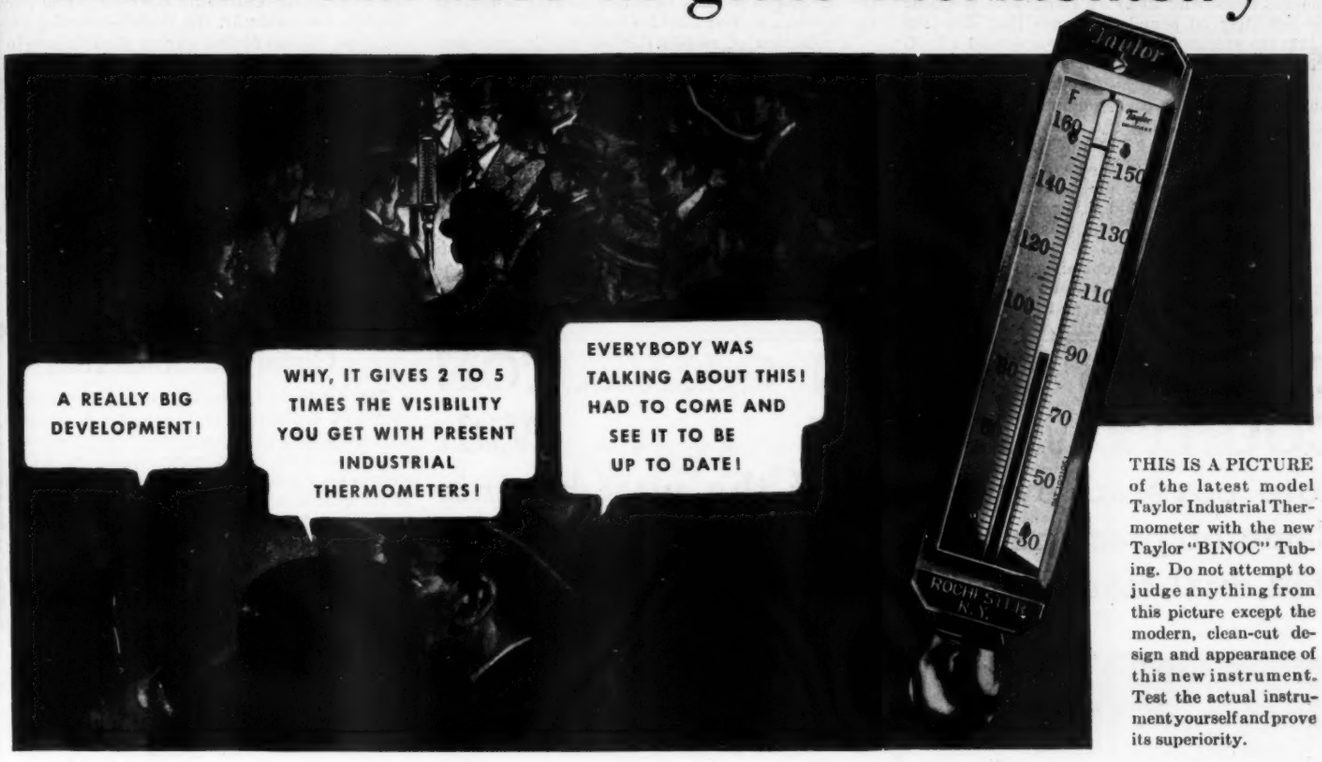
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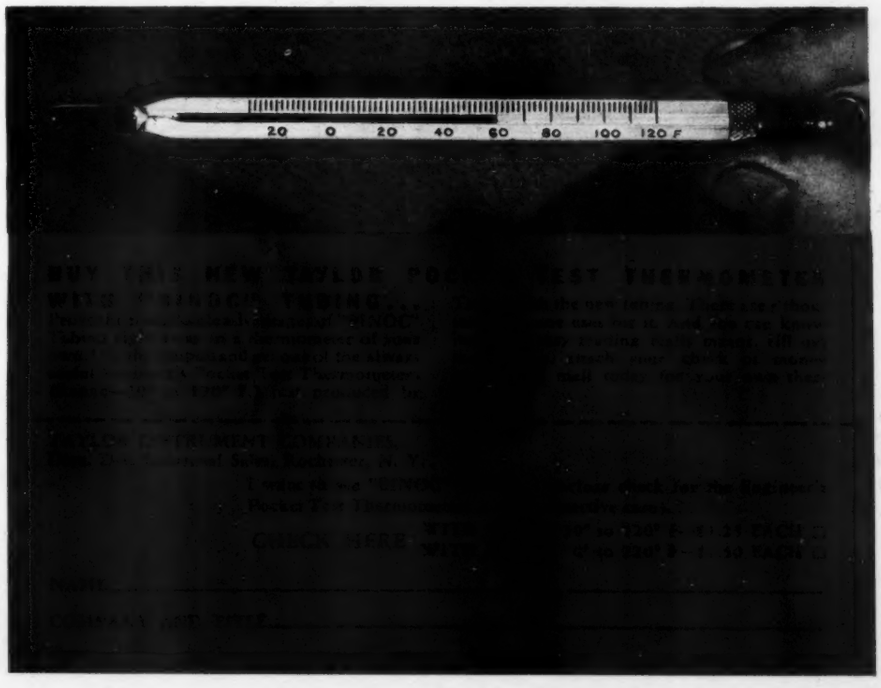

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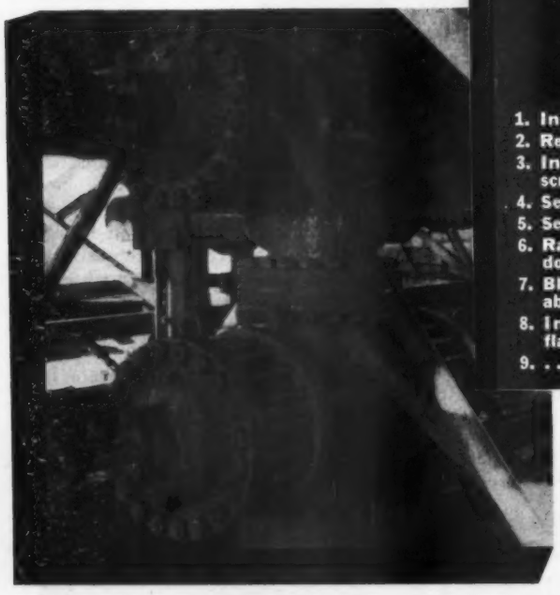
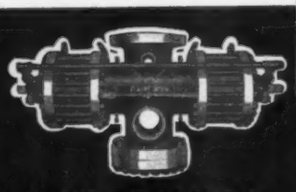
low zero and introduced into the snow machine, where it is expanded. After expansion, the snow is then compressed hydrostatically to 2,000 pounds per square inch and the dry ice, which comes out of the snow presses at 109 degrees below zero, is in blocks measuring 10 by 10 inches and weighing approximately 50 pounds. The gas that does not go into the presses is picked up by a special 7 by 7-inch compressor and reduced to the incoming well pressure, after which it is introduced into the suction pipe of the main carbon dioxide compressor.

The ice after coming out of the snow machine is wrapped in two thicknesses of paper and placed in containers holding 2,200 pounds preparatory for shipment by specially insulated trucks to Los Angeles, Phoenix, Yuma and other Imperial Valley points. The plant, which has a daily capacity of 10 tons of dry ice, operates 24 hours per day and is unable to meet current demands. Special equipment installed at the plant permits storage of carbon dioxide gas in cylinders under a pressure of 1,000 pounds and this gas, most of which is sold in Los Angeles, is extensively used in carbonated beverages. The Hancock Oil Co. recently started experimental work to determine the feasibility of using natural dry ice as a generator of carbon dioxide gas to be used as a fire blanket in several of its tanks at Los Angeles harbor.

Production of carbon dioxide gas is regulated to a large extent by the demand for dry ice and consequently production is highest during the summer months and lower during periods of cooler weather. Steps are being undertaken to minimize this fluctuation, however, and building up a more stable market and the outlook is very promising. The American Steamship Co. has been experimenting with dry ice as a refrigeration unit for nearly a year and this is expected to culminate soon in the installation of storage compartments in the holds of a number of its 22 ships in order to accommodate refrigeration cargo. Tests extending over a period of several months indicate that dry ice is an excellent preservative of perishable commodities and that the experiment has proved especially successful. Increased use in refrigerated cars of the Pacific Fruit Express is also anticipated as dry ice is being made available in quantity in a number of southern California districts. From November 4 to December 31, the Pacific-Imperial Dri-Ice Co. used 572,080 feet of carbon dioxide gas in the manufacture of dry ice and this increased to 774,210 feet during the period from January 1 to February 28. During the months of March and April the company utilized 1,061,070 feet of gas in manufacturing dry ice and the amount of gas used in May totaled 820,130 feet. During June the company required 1,627,150 feet of carbon dioxide gas to meet its requirements and during July it required a total of 2,234,810 feet of gas. Production of dry ice obviously varied with the amount of gas treated.

TO 9,636 FEET IN GALVESTON COUNTY WILDCAT . . With hole covered every foot of the way by this Cameron pressure operated dual Hook-up





FEATURES

1. Instant pressure opening and closing.
2. Remote control from derrick floor.
3. Independent ram closing and locking screws.
4. Self-feeding ram packing elements.
5. Self-centering pipe rams.
6. Ram collar recesses hold pipe up or down.
7. Blind rams or pipe rams interchangeable.
8. Integral flowline outlets and body flanges.
9. . . . 22 other outstanding features.

● Two 13-3/8" Cameron Type SDA Blowout Preventers comprise this hook-up. The lower preventer has no flowline openings, and is equipped with blind rams for making a shut-off with pipe out of the hole. The upper preventer is equipped with rams to close around the drill pipe.

WHEN surface casing on this Galveston County wildcat was set, the major company drilling it installed the Cameron Type SDA Drilling Control Hook-up shown above. The hole was carried to 9,636 feet before abandonment, and was fully protected every foot of the way. With drill pipe in the hole, the upper blowout preventer, equipped with pipe rams, provided swift, positive closure of the annular space in event of emergency. With drill pipe out of the hole, the lower preventer, equipped with blind rams, provided a complete seal-off of the well bore. Both units were opened and closed by 4/way control valves located within easy reach of the driller. One-quarter turn of a control valve lever opened or closed either unit. For safe, absolutely dependable protection against costly blowouts; for complete insurance against loss of rig and drilled hole; for safety to drilling crews, rely on Cameron Type SDA Full Pressure Operated Blowout Preventers and Pressure Operated Drilling Gate Valves. Beyond question of doubt, they constitute the most positive assurance against blowouts on a drilling well that can be purchased at any price.

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Ipatieff Is Author of Book on Catalytic Reactions

Dr. Vladimir Ipatieff, director of chemical research of Universal Oil Products Co., Chicago, is the author of a new book, "Catalytic Reactions at High Pressures and Temperatures," in which he records his fundamental research work in that field. In the volume Doctor Ipatieff, who was one of the earliest workers in the field of hydrocarbons and a pioneer in research on catalysts, explains the theories he has evolved from his experiments. It contains some of his previously published work, not readily accessible elsewhere, as well as describing for the first time results of his investigations during the past five years.

Much of his later work is of fundamental importance in the field of hydrocarbon reactions—polymerization of olefins and the alkylation of various classes of organic compounds—so that the work is of special interest to petroleum technologists.

Doctor Ipatieff has enriched the science of chemistry with many major discoveries. As early as 1906 he discovered a method for making olefins by the catalytic dehydrogenation of alcohols. A few years later he introduced high pressures in the polymerization of ethylene and other olefins.

"There are numerous studies," says Doctor Ipatieff, "which I did not finish because of the conditions under which I worked. These unsolved problems have not lost their interest, and I shall feel fully compensated for this publication if it inspires others to further work in this field."

The book was published August 25 by the Macmillan Co., 60 Fifth Avenue, New York.

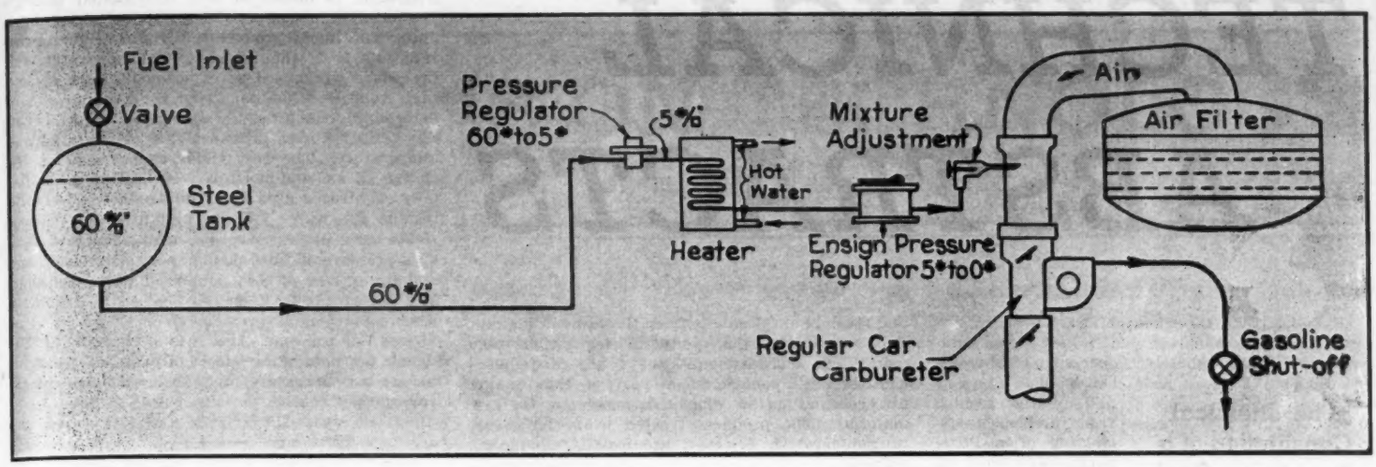
Highways Behind Motorists' Needs

"We are 20 years behind the times in road building," states Walter N. Polakov in the current issue of Better Roads.

"For every dollar we have invested we must invest another dollar to meet the existing deficiency. Our investment is already $12,000,000,000 but additional investment of a like amount is necessary to bring our highway system up to present-day standards."

The road expert states that while the engineer has done an excellent construction job, highway improvement is far behind the investment in automotive equipment. The deficiency is particularly striking in rural and agricultural districts. Since 1930, Mr. Polakov states, dirt roads have been reduced from 77 per cent of the total road mileage of the country to 65 per cent. Mileage of low-type and medium type roads have increased from 19 per cent to 29 per cent of the total mileage and the high-cost type mileage has increased from 3.9 per cent to 5.3 per cent. The reduction in dirt road mileage was attained largely through use of the bituminous and oil mat type of surfacing.

Rural education, health, recreation and culture are handicapped severely by the lack of all-weather roads and he cites as examples a difference of 11 per cent in the infant mortality rate on farms in two neighboring states. In the state with the lower mortality rate highways are 71 per cent improved. In the state with the higher mortality rate roads are 75 per cent unimproved.



Progress of liquefied gases from storage tank in rear of car through the pressure regulators, hot water heater and into the gas-gasoline carburetor

LIQUEFIED GAS USED AS A MOTOR FUEL

By W. T. ZIEGENHAIN

Without replacing or interfering with the normal operation of the regular gasoline carburetor on his car, Murray D. Etherton, an engineer located at Seminole, Okla., has equipped his 1936 De Soto to run on either liquefied gas or gasoline, the switching from one fuel to the other simply involving the turning of two valves.

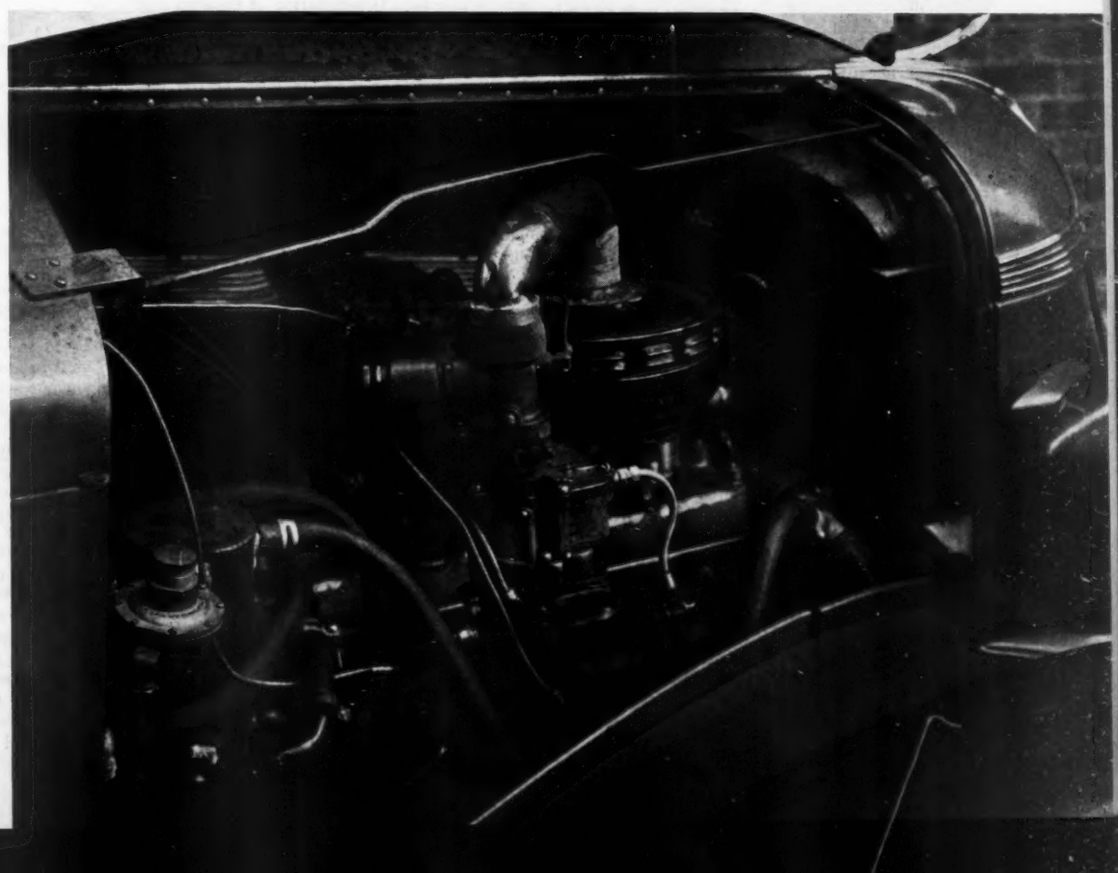
The liquefied gas is a by-product of a local natural gasoline plant and has an initial boiling point of about 12° F. It is a mixture of propane, butane and iso-butane and as such has little commercial value. The cost of the equipment needed to permit the use of this fuel approximates $60 and the expenditure might easily be justified by natural gasoline plant operators who recover such a fraction during the stabilizing of the regular grades of natural gasoline. The assembly essentially consists of a 20-gallon tank located in the rear of the car, a small pressure regulator, a heating coil and a commercially-built and assembled Ensign gas pressure regulator, jet and mixing throat. These items are shown in the accompanying diagram and all except the tank are visible in the accompanying picture.

The fuel enters the tank through the inlet valve and is held under pressure. The vapor pressure of the fuel at 100° F. atmospheric temperature is approximately 60 pounds per square inch gauge and of course is more than sufficient to force it from the bottom of the tank into a small Fisher regulator where the pressure is reduced at the outlet to 5 pounds per square inch. At this point the temperature of the fuel is approximately 37° F. The fuel then passes through a heating coil consisting of about 10 turns of one-half inch copper coil housed inside of a closed steel cylinder 6 inches in diameter and 8 inches high. A hot water inlet and an outlet are provided in the shell of the cylinder and the hot water from the engine circulates through it continuously. After passing through the heating coil the fuel is converted into the gaseous or vapor form and it then goes to the Ensign gas carburetor. First it passes through a super-sensitive regulator where the pressure of the dry gas is reduced to 0 pounds per square inch or atmospheric pressure. Following this regulator the gas passes through a needle valve and into a venturi-throat. This throat is attached to the regular carburetor in place of the air filter and the air filter is attached to the upper or inlet end of the Ensign throat. Thus, briefly stated, the gas apparatus is inserted between the air filter and the gasoline carburetor but does not interfere with the normal operation of the gasoline system.

In the operation of the car, when using this type of fuel there is no chance for vapor-locking due to the nature of the carburetor system. The car is easier to start and because of the naturally high octane value of the liquefied gas fuel no knocking occurs in the engine.

Mr. Etherton has operated his car on this fuel for about 2 months and now plans to utilize the refrigerating value of the fuel to help cool the air inside his car. He plans to expand the liquefied gas down to about 2 pounds, passing the gas through a specially-built exchanger designed similar to the conventional car hot water heaters. He will provide for collecting the moisture which will condense on the outside and will also provide for reflecting the cool air upward. The refrigerating value of the vaporizing liquid might also be used to cool the air entering the carburetor. This, like supercharging, would make it possible to charge more mixture into the cylinders thereby increasing the maximum horsepower. The efficiency would also be increased due to the fact that heat loss to the waterjacket would be reduced. This cooling, with the extremely high antiknock property of the fuel, would make it possible to use a much higher compression ratio to further increase the power and efficiency.

Hood raised showing from left to right: Pressure regulator, hot water heater, and gas-gasoline carburetor fitted into stock car



TECHNICAL ABSTRACTS

The Chemical Constitution of a Bituminous Coal as Revealed by Its Hydrogenation Products

By S. S. BIGGS and J. F. WEILER

Before Pittsburgh Meeting of American Chemical Society

By catalytic hydrogenation, first over Adkins catalyst at 350°, and then over Raney nickel catalyst at 22°, approximately 80 per cent of the carbon of the extract and of the residue from the benzene extraction of a Pittsburgh seam coal at 260° has been converted to hydroaromatic oils which can be regarded as the hydrocarbon skeletons of the building units in the respective materials. Fractionation of these oils followed by characterization of the fractions through their molecular weights, boiling points, refractive indices, and hydrogen-carbon ratios has given an approximate distribution of the various sized units in the extract and in the residue.

Coal and Oil: A Comparison of Some of Their Hydrogenation Products

By M. PIOR

Before Pittsburgh Meeting of American Chemical Society

By use of destructive catalytic hydrogenation, fuels like coal, tar, petroleum and shale oil give high yields of products usually obtained from mineral oils. Practically the only by-product is a certain amount of gaseous hydrocarbons which, however, may be utilized in the process by conversion to hydrogen. Catalytic hydrogenation makes possible the production from the same raw material of different final products such as fuel oil, lubricating oil, diesel oil, illuminating oil, or gasoline, according to the market demand.

In the sump phase hydrogenation described, heavy raw materials are treated in the liquid state. Such materials as asphaltic petroleum or cracking residues, tars and coals (the latter finely ground and pasted with oil), are mixed with a finely divided catalyst and subjected to hydrogenation at elevated pressure and at temperatures of about 400 to 500° C. In this manner heavy oil, middle oil and some gasoline are produced. The middle oil can be further split in the gas phase to gasoline over lump shape catalyst, rigidly arranged in the reaction vessel. The same catalyst arrangement may also be used just as well for the improvement of lubricating oils and illuminating oils, for the refining of gasoline, benzol, etc. and for the production of antiknock gasoline. The life of rigidly arranged catalyst is much longer than one year. It is characteristic of catalytic destructive distillation that the conversion of the raw materials can be carried out so mildly that their valuable properties are retained in their hydrogenation products. In this case, the composition of the raw material reappears in the ultimate analysis of the hydrogenation products of the sump phase, i.e., asphalts, heavy oils, middle oils, sump phase gasolines. The analytical figures become increasingly similar as the boiling point of the products compared decreases, but even with the gases differences are still noticeable. There is a marked similarity of sump phase products from oil residues and straightrun products from the same crude oils. Products of the sump phase hydrogenation when using but small amounts of finely distributed catalyst, still contain some part of the oxygen, nitrogen and sulfur compounds present in the raw material. The products treated over rigidly arranged catalyst, however, are usually completely refined.

The equipment used for the hydrogenation is in all cases practically the same. A plant which has been used for oil can be converted easily for tar or coal. However, in the latter case, additional equipment has to be provided. Also with the same equipment a great variety of products may be obtained.

Hydrogenation

By F. S. SINNATT, J. G. KING and ANGUS MacFARLANE

Before Pittsburgh Meeting of American Chemical Society

In 1923 experimental work on hydrogenation was started at the Fuel Research station, Great Britain, to ascertain whether British bituminous coals could be readily converted to motor spirit. After a study of catalysts, an experimental plant of 1 ton per day capacity was constructed. The mechanism of coal hydrogenation has been studied especially for the light it sheds on coal constitution. Special attention has been given to the hydrogenation and treatment of low-temperature tars, the properties of which are described. The influences of pressure and temperature upon the hydrogenation and cracking of the aromatic constituents of low-temperature tars are reviewed, especially with reference to naphthalene. The influence of temperature from 300° to 510° C. and of pressure at 200 and 400 atmospheres on the hydrogenation of tar in a continuous plant were studied. After hydrogenation above 370° C. the tar loses its black color but remains opaque, at 450° C. the product is transparent and pale yellow in color. Deterioration of catalyst increases with increasing temperature of operation. The construction and operation of the semi-technical scale size tar hydrogenation plant now in use is described together with analyses of the raw and treated tars. Temperature conditions in the catalyst chamber and means for dissipating the heat of reaction are described.

An Apparatus and Method for Continuous Hydrogenation Tests on Coal

By T. E. WARREN and R. E. GILMORE

Before Pittsburgh Meeting of American Chemical Society

This paper describes in detail an apparatus and method for continuous hydrogenation tests on coal and other materials, developed at the Fuel Research Laboratories of the Canadian Department of Mines. The hydrogen is continuously analyzed, compressed and passed to the bottom of the reaction chamber. This is an electrically heated vertical tube 10 feet in length with an internal diameter of 2.74 inches. A suspension of powdered coal in oil, produced in a previous cycle, together with stannous oxide as the catalyst is charged also to the bottom of the reaction chamber. The product is withdrawn from the top of the chamber, cooled to room temperature, and collected in a receiver where it separates into liquid and gaseous fractions. The gaseous fraction, which is largely hydrogen, is measured and recirculated through the reaction chamber without reducing the pressure. The liquid product is withdrawn at regular intervals from the receiver. The apparatus and procedure were used in experiments on a typical high volatile bituminous coal for the purpose of determining the effects of changes in three operating variables, viz., pressure, rate of charging and temperature. The best yields as per cent of the charge of ash-and-moisture-free coal were as follows: Hydrogen used 8, net oil produced 77.6, solid residue 6.3, water 7.7, gas and loss 15.7. These yields were obtained with a temperature of 829° F., a pressure of 2,940 pounds per square inch, and a charging rate of 8.83 pounds of paste per hour. At a pressure of 2,430 pounds per square inch, with other conditions as previously stated, the yield of oil was 72.5 per cent. At a rate of charging of 6.04 pounds per hour, the yield of oil was 53.7 per cent, and at a temperature of 857° F. the yield of oil was 54.9 per cent.

The Residues From the Hydrogenation of Bituminous Coal: A Method for the Preparation of Fusain

By C. C. WRIGHT, M. M. BALDWIN, C. C. HSIAO and A. W. GAUGER

Before Pittsburgh Meeting of American Chemical Society

An experimental procedure is outlined for the complete conversion into liquid or soluble products of all the banded constituents of bituminous coal other than fusain. Experimental data are presented to show that the degree of conversion obtainable by hydrogenation of organic material in bituminous coal is limited only by the percentage of fusain present in the coal treated and by the conditions of the hydrogenation. The petrographic characteristics of the fusain residues and of the residues in which incomplete conversion has been obtained are thoroughly discussed by the authors and their outstanding properties described.

The Action of Aqueous Alkali on a Bituminous Coal

By LEO KASEHAGEN

Before Pittsburgh Meeting of American Chemical Society

The action of aqueous alkali on Edenborn coal has been investigated at temperatures from 250° to 400° and at sodium hydroxide concentrations from 1 N to 100 per cent. The major products were coke-like residues which could be produced at temperatures as low as 275°, although the temperature of initial plasticity of Edenborn coal is 393°. Using 5N sodium hydroxide, the oxygen and hydrogen contents of the residues became progressively lower as the temperatures of the treatments were increased, but when alkali concentrations of 60 to 80 per cent were used, the lowering of the oxygen content occurred with very little lowering of the hydrogen content, so that from the standpoint of hydrogen economy, residues so produced are more suitable for hydrogenation than the coal itself. Moreover, hydrogenation of these residues yielded a product which was more hydrocarbon-like in composition than the product from a similar hydrogenation of the coal, and which showed some of the characteristics of a lubricating oil. Other products consisted of a solid phenolic material of high molecular weight, a viscous liquid of neutral nature, carbon dioxide, free hydrogen and gaseous hydrocarbons. The oxygen in the carbon dioxide, and the free hydrogen, came partly from the coal and partly from the decomposition of water.

The nature of the products supports the theory that the coal substance is made up of complex condensed ring systems, with oxygen present in the form of ether or heterocyclic linkages. Similar results on alkali treatment of the coal and the amorphous portion of the benzene extract indicate the natures of the two materials to be the same.

QUESTIONS ON TECHNOLOGY

By Charles K. Francis, Ph.D., Technical Editor

Yields of Gasoline Obtained by Modern Refining Methods

Could you please inform me what is the greatest percentage of gasoline that is obtainable, or ever has been obtained, by the most advanced and latest cracking process from any barrel of oil? I put the question this way, since I do not know from which kind of oil you normally get the greatest amount of gasoline. I have heard that with the latest processes it is possible to obtain somewhere in the neighborhood of 90 per cent gasoline from oil. Is this correct, or what is the correct figure?—H. C. J.

There are two methods now in commercial use for the manufacture of gasoline from petroleum, the skimming or topping process and the cracking process. The first is applied to the crude oil and consists in heating the oil in a still, under normal pressure, to a temperature high enough to cause the separation of the gasoline and kerosene vapors, which are cooled and collected as distillate.

There are some crude oils which produce exceptionally high yields of gasoline by the simple process of skimming, a few examples of these are shown in the table.

TEXAS HIGH GASOLINE OILS

Location:	Depth feet	Gravity A.P.I.	Gasoline— Grav.	Gasoline— %
Big Lake, Reagan Co.	3,523	57.7	65.6	64.3
Esperson, Liberty Co.	6,844	55.2	55.2	92.8
Laurell, Webb Co.	2,234	49.9	58.2	66.9
Refugio, Refugio Co.	6,470	57.2	60.8	80.3

A few oils of higher gravity and therefore high gasoline content are found in the United States, a recently discovered oil in California is 100 per cent gasoline, having a gravity of 63° A.P.I.

The cracking process may be applied to the topped oil, the residue after the removal of gasoline and kerosene, or to the heavy fractions, such as gas oil. The essential features of the cracking process are high temperatures and pressures applied in special apparatus, the cracking still. The yields of cracked gasoline may vary from 20 to 30 per cent by a single cracking treatment. The combination of topping and cracking usually give yields close to 60 per cent for the average oil; individual plants exceed this quantity.

The hydrogenation process operates at higher pressures and temperatures than the cracking process and has for its object the introduction of hydrogen into the hydrocarbon molecules to convert the oil into gasoline. It is possible by hydrogenation to obtain yields of gasoline from a given oil exceeding 100 per cent. However, the octane value of the product is reduced when obtaining the extreme yields so the indications are that a yield of 90 per cent will produce a satisfactory motor gasoline. Under present conditions the hydrogenation process cannot be profitably operated in the United States.

Sulfate Method for Determining Lead in Motor Gasoline

Will it be possible for you to give me a description of what is called the Sulfate Method for determining the quantity of lead in motor gasoline?—T. C. W.

The Sulfate Method, as used by the War Department Air Corps, for determining tetraethyl lead in gasoline has the advantage of both rapidity and accuracy. The outline given here is that followed by the War Department.

DETERMINATION OF TETRAETHYL LEAD IN GASOLINE

Sample: For lead content approximately 3 ml. per gallon and over, a 50 ml. sample is recommended. For lower lead content a 100 ml. sample is recommended.

Method of Analysis (A) for Aviation Gasolines*

1. Add to the sample with stirring a sufficient quantity of a 30 per cent bromine—70 per cent carbon tetrachloride mixture to produce a permanent brown color.
2. Evaporate to dryness on a steam plate with a moderate air jet.
3. Add 10 ml. conc. H_2SO_4 and heat until residue is well charred.
4. Add 30 ml. conc. HNO_3 and boil to SO_3 fumes with watch glass on breaker.
5. Repeat additions of HNO_3 and fuming until residue is colorless or light straw. (Once is usually sufficient.)
6. Cool sulfuric residue and take up with 20 ml. alcohol—80 ml. water.
7. Let white precipitate of $PbSO_4$ settle (about one to two hours), filter through weighed gooch crucible, wash with water containing 0.5 per cent H_2SO_4 and 5 per cent alcohol, and finally once with alcohol.
8. Dry at 110° C. for four or five hours or at 150° C. for one to two hours, weigh and calculate $PbEt_4$. For a 100 ml. sample $PbSO_4 \times 24.44 =$ ml. $PbEt_4$ per gallon.

Method (B) for Cracked and/or High Endpoint Gasolines

1. Brominate the sample slowly in a bath of ice water if reaction is violent.
2. Transfer to a separatory funnel, leaving the bulk of the ppt. in the beaker.
3. Wash the gasoline twice with about 50 and 35 ml. respectively of 10 per cent HNO_3 shaking vigorously about two minutes and allowing to separate well each time. Return the washings to the original beaker. Discard the gasoline.
4. Add 10 ml. conc. H_2SO_4 and proceed as in (4) and following in Method (A).

Reference: Eng. Sect., Mat. Div., U. S. Army Air Corps, Dayton, Ohio.

*Cracked aviation fuels, identified by violent reaction with bromine, will be analyzed by Method (B). Method (A) is especially recommended for aromatic fuels.

SPECIFICATIONS

Lubricating Oil Class D or S.A.E.

PART I.

These oils shall be refined petroleum oils, without admixture with non-hydrocarbon materials, suitable for lubrication of internal combustion engines, other than aircraft and diesel. Six grades S.A.E. Nos. 20-70. Shall meet limiting requirements and also obtain at least four credits.

Viscosity:

TABLE 1.

S.A.E. No.	Saybolt Univ. Viscosity at 130° F. Min.	Max.	at 210° F. Min.	Max.
20	120	185	.....	.....
30	185	255	.....	.....
40	255	.....	.....	75
50	.....	.....	75	105
60	.....	.....	105	125
70	.....	.....	125	150

One credit will be allowed if the viscosity found at 130° F. is not higher than the value at 130° F., given in Table 2, corresponding to the measured viscosity at 210° F.

Part 2 next week.

Characterization Factor Indicates Crackability of Stock

What is the meaning of the term Characterization Factor as used in connection with the oil charged to a cracking still? I have been unable to find this term defined in the several books on refining that I have examined.—B. G. S.

It has been recognized that of the several types of oil, the paraffinic yield when cracked the highest percentages of gasoline and the aromatic oils the lowest, while there are a wide variety of oils between that are uncertain with respect to potential yields of gasoline. The Universal Oil Products Co. developed the Characterization Factor for classifying any oil as to its crackability. This factor has been correlated with several of the properties of oils.

With the paraffin hydrocarbons of maximum hydrogen content at one extreme and the aromatic compounds of minimum hydrogen content as the other, the index to paraffinicity, the Characterization Factor has been developed and empirically related to certain laboratory inspections.

The definition of the U.O.P. Characterization Factor arose from the observation that when a crude oil of supposedly uniform character is fractionated into narrow cuts, the specific gravity of these cuts is approximately proportional to the cube roots of their absolute boiling points. The proportionality factor may then be taken as indicative of the paraffinicity of the stock. Thus:

$$K = \frac{\sqrt[3]{T_B}}{S} \qquad (1)$$

where:

K = U.O.P. Characterization Factor.
T_B = Average boiling point, ° R. = ° F. + 460.
S = Specific gravity at 60° F.

When dealing with mixtures of wide boiling range, a special method of obtaining the average boiling point as described by Watson and Nelson must be used. For narrower cuts the Engler 50 per cent point may be taken as the average boiling point.

The Characterization Factor shows fair constancy throughout the boiling range of a number of crude oils and for others may either increase or decrease in the higher boiling range. In the paraffin series fair constancy for the average of the reported isomers exists up to a boiling temperature of 700° F. Values of the Characterization Factor range as follows:

Pennsylvania stocks, 12.2-12.5.
Mid-Continent stocks, 11.8-12.0.
Gulf Coast stocks, 11.0-11.5.
Cracked gasolines, 11.5-11.8.
Cracking plant combined feeds, 10.5-11.5.
Recycle stocks, 10.0-11.0.
Cracked residuums, 9.8-11.0.

The Characterization Factor is readily calculated from equation (1) from only the specific gravity and average boiling point.

References: Egloff and Nelson, The Oil and Gas Journal, July 2, 1936, page 34. Watson and Nelson, Ind. Eng. Chem., 25, 880 (1933). Watson, Nelson and Murphy, Ind. Eng. Chem., 27, 1,460 (1935).

Questions of Petroleum Technology may be sent to Dr. Charles K. Francis, The Oil and Gas Journal, Tulsa, Okla. When a copy of the answer is desired postage should be enclosed.

PROBLEMS FROM READERS

Edited by T. F. Smiley

Life of Sucker-Rods Depends Largely Upon Proper Care and Storage

Damage or breakage of sucker-rods has been a source of serious loss on oil leases in which I am interested. I am pretty sure the trouble lies chiefly in lack of proper handling and in careless storage. It is not improbable that there has been poor judgment in selection of the kind of rods to use in the first place. If you can give me some suggestions concerning the care and storage of sucker-rods I shall appreciate it very much. How much stretch is there figured to be in sucker-rods for each 1,000 feet of length in the well? Is there any way of preventing or decreasing this stretch?—S. R. F.

Loss on sucker-rods resulting from improper handling and storage was formerly heavy, but adoption of more intelligent practices has stopped most of such loss on efficiently conducted oil properties. Breakage has been eliminated in many wells previously considered bad actors. This has been accomplished through correct selection of rods to begin with and then taking the right kind of care of them. In discussing care of sucker-rods Austin Allen says they should be stored on closely spaced wooden stringers that will prevent undue sagging. These stringers should be spaced at 5 feet or less intervals. The lower layers of rods should be 6 inches off the ground. After the first layer has been placed on the stringers, a strip of 2-inch lumber should be placed directly over each stringer and a second layer of rods laid thereon. The pile of rods should be stored in bundles of single rods as received when bought. Most rods are painted at the factory, the threads oiled and protectors screwed thereto. When the rods are first received, protectors should be checked and if any are loose, they should be tightened and if any are missing the threads should be inspected, greased and the protector replaced. If rust spots should appear on the rod, they should be sprayed with oil or painted.

New pony rods should be stored separately from old ones and in such a manner that they will not be bent or nicked before they are put into use, Mr. Allen says. If it is necessary to store second-hand rods, the threads should be properly greased with lubricant and fitted with protectors. The strings of rods should then be tagged showing the wells in which they have been used, the length of service in each well, the number of breaks that have occurred in the string, the make and type of rods, and the strings should be stored together in such a way that they will not lose their identity. Each rod, as it is removed from the well, should be marked as follows:

B condition.—Identify by painting red band around rod 1 foot from pin end. This includes rods which are in good shape and have been pulled from wells for other reasons than rod failures; such as wells shut down, changing over to other type pumping installations, etc., and are still suitable for heavy duty.

C condition.—Identify by painting white band around rod 1 foot from pin end. This includes rods which have been pulled from heavy duty service on account of rod failures but are still good enough for light duty in deep wells.

D condition.—Identify by painting green band around rod 1 foot from pin end. This includes rods which are not good enough for light duty in deep wells but will handle shallow light wells.

Junk.—Identify by painting blue band around rod 1 foot from pin end. This includes rods which are no longer serviceable for well pumping service.

All sucker-rods that are fit for well use should be transported in such a manner that they will not be kinked or nicked during moving. They should only be transported on specially built sucker-rod beds, if possible. In emergencies where such a bed is not available the temporary bed should be made of 2-inch planking and reinforced at the load binder positions in such a manner that the chain will not injure the rods when they are boomed down. The rods should be mounted in such a way that they will not be kinked near the end of the rod because of the interference of the couplings with each other or the rod beds. Sucker-rods should be lifted to and from the truck and under no circumstances should they be thrown or dropped. This malpractice will invariably nick, kink or otherwise injure rods.

During recent years metallurgical research and field observations have shown that there are several different types of rods needed by the oil industry. These are designed for wells of the following types: (1) Common rod for sweet oil only; (2) mild corrosion, medium weight; (3) extra strong for sweet oil only; (4) mild hydrogen sulfide; (5) bad hydrogen sulfide. Each well should be studied individually to determine the degree of corrosion, the load, and other factors affecting the choice of type of sucker-rod steel, and the rods used should be the ones that will be the most economical in overall operating costs.

Sucker-rod stretch depends on several factors. Manufacturers of rods have tables and formulas from which it is possible to determine closely the action of any string of rods in a well. Proper selection of rods, working-barrel and pumping equipment will reduce sucker-rod stretch to a minimum and yield maximum efficiency. There is no general formula that can be applied to all wells in this connection, and your best move apparently is to consult the manufacturers.

WHY THEY CALLED IT

Ice Ages

Once it was customary to speak of the Ice Age. Today geologists recognize four glacial epochs, but there are several theories as to their cause. One ascribes the earth's great climatic changes to "solar radiation." Dr. Spencer Jones, astronomer royal, says the sun is probably a variable star of long period. "It should not be surprising," says Doctor Jones, "if the sun's output of heat were variable. We should rather be surprised if it were not. A variation in the stellar magnitude of the sun of about half a magnitude would be adequate to account for glacial epochs. Such variation is not large for a variable star and might well occur." If geologists can prove that glaciation has been worldwide and not confined to one hemisphere during the four glacial epochs, this will indicate that climatic changes have been due to solar radiation.

Any One of Several Conditions May Cause Overheating of Engine

I am trying to find out the reason a gas engine we use in pumping wells gets overheated so much. Recently it had to be repaired after it had been damaged in this way and I am afraid it will get into bad condition the same way again, for it still gets overheated. There is nothing wrong that I know of with the water circulating system, and I am wondering if there could be some other cause for such trouble.—T. D. O.

You evidently are using the common method of cooling gas engines used as prime movers in pumping oil wells, namely by circulation of water from a tank just outside the engine house. These water supply tanks vary in size according to the size of the engine. Ordinarily they are of the open-top, wooden-stave and wooden-bottom type of 250 bbls. capacity. In most cases where this procedure is followed the engines run fairly cool, and it usually is taken for granted by most operators as sufficient. Thermometers installed in the circulating system indicate that engines are not running at abnormal temperatures, and since they are generally cool enough to permit one to place a hand on the cylinder or on the cylinder head, the operator thinks his engine is running cool enough, which with the proper lubrication should keep the engine operating in good order.

There are various factors to consider other than pumping water through the cylinder-jacket. In some instances a normal volume of water is put through the system and from indications the engine is being adequately cooled. In some cases, however, scaling of the inside of the water-jacket will not permit the water to absorb the heat generated by the expansion of the gases within the cylinder, and the friction set up by a fast traveling piston, which may or may not be properly lubricated. The load under which the engine is operating is also a vital factor. An overloaded gas engine in most cases will tend to overheat because of an inadequate cooling capacity for the work being done within the engine. Preignition is another cause of overheating, but it may be eliminated by careful observation and adjustment.

Perhaps the most important and most common cause of overheating in gas engines and the main reason for repair jobs necessary to engines so affected is deposition of calcium carbonate scale within the water-jackets of the cylinder and cylinder-head. With the accumulation of scale the efficiency of the transfer of heat from the cylinder due to the circulating water is materially reduced due to the insulating effect presented by the scale.

Various methods have been tried for the removal of this scale, either periodically or continuously, and the results have varied widely. One method is to "treat" the cylinder water-jackets with hydrochloric acid, which is accomplished by any of several different methods. Some operators merely disconnect the water intake and discharge lines from the cylinder, plug the inlet connection on the bottom of the cylinder or head and fill the water jacket of the cylinder and head with hydrochloric, or as it is sold commercially, muriatic acid.

The acid attacks the calcium carbonate scale, which is changed by the chemical action with the acid into calcium chloride, carbon dioxide and water, the first two being soluble in the latter. As the acid becomes depleted it is drawn off and new acid added to the water-jacket. Repetition of this process eventually removes the scale.

This method is expensive and not commonly used for that reason. It is effective as a cure only and not as a preventative.

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GENERAL SPECIFICATIONS

O. D. Dia.	Length	Bore	D. P. Used With	Approx. Wt.
4⅝"	20'	1⅞"	3½"	831 lbs.
	24'			1,022 lbs.
	30'			1,308 lbs.
6¼"	20'	2 13/16"	4½"	1,375 lbs.
	24'			1,708 lbs.
	30'			2,203 lbs.
	40'*			3,039 lbs.
	50'			3,870 lbs.
7"	20'	3 1/16"	5 9/16"	1,662 lbs.
	24'			2,035 lbs.
	30'			2,595 lbs.
	40'*			3,528 lbs.
	50'*			5,561 lbs.
8"	20'	5"	6 5/16"	2,108 lbs.
	24'			2,576 lbs.
	30'			3,277 lbs.
	40'*			4,445 lbs.
	50'			5,613 lbs.
9"	20'	5"	6 5/16"	2,638 lbs.
	24'			3,278 lbs.
	30'			4,261 lbs.
	40'*			5,883 lbs.
	50'*			7,505 lbs.

* Furnished on order from mill.

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Refinery Operations in Mid-Continent Slightly Decreased in September

By D. H. STORMONT

Refiners in the Mid-Continent, during September will continue to hold their crude runs to stills at high levels according to estimates made at the first of the month and based on data supplied by individual refiners. Total runs to stills during September are estimated to average 550,665 bbls. during the month, or a decrease of 6,985 bbls. daily from the year's peak established in the preceding month. The decrease was general throughout the various districts comprising the Mid-Continent with the exceptions of North Louisiana, Southwest Texas, and the Texas Panhandle where slight increases were recorded.

To Kansas may be attributed the largest reduction; crude runs in that area being decreased 4,870 bbls. daily to a total of 126,640 bbls. The greater part of the decrease was due to the curtailing of activities in two plants, namely those of Shell Petroleum Corp. at Arkansas City and Skelly Oil Co. at Eldorado. A reduction in runs at Cusco Oil & Refining Co.'s plant also served to lower the Kansas total. Barnsdall Oil Co. has now completed the construction of its new 6,000-bbl. combination cracking and topping unit at the Wichita refinery and is boosting runs to stills by 1,000 bbls. daily.

The East Texas district recorded the next largest decrease, one of 4,610 bbls. daily. This district has now settled down to a more stabilized condition, the list of operating plants varying but little from month to month and the amount of illegal oil being refined steadily on the decrease. It was reported that the amount of hot oil being refined in this area was less than 8,000 bbls. daily during the first week of the month. Refiners operating in East Texas have experienced a most successful season so far this year, obtaining a good price for their gasoline and having little difficulty in finding a market for their high-octane motor fuel.

Mid-Continent Crude Runs

Average Daily (Barrels)

(Advance estimate compiled by The Oil and Gas Journal)

	1934	1935	1936
January	448,360	426,070	501,600
February	456,619	448,810	519,960
March	465,680	451,510	478,760
April	458,220	467,765	506,775
May	457,165	466,015	513,510
June	459,908	485,015	527,225
July	477,012	494,210	539,370
August	501,750	508,960	557,650
September	499,830	541,080	550,665
October	500,755	523,620	.....
November	500,445	524,475	.....
December	440,735	511,025	.....

Operation by Refinery Districts

Daily crude runs

	Sept.	August	Decr.
Arkansas	23,350	23,450	100
East Texas	63,170	67,780	4,610
Kansas	126,640	131,510	4,870
N. Central Texas	39,655	40,870	1,215
North Louisiana	46,800	45,050	*1,750
Oklahoma	156,050	158,000	1,950
Southwest Texas	22,070	19,390	*2,680
W. Tex. Panhandle	72,930	71,600	*1,330
Total	550,665	557,650	6,985

*Increase.

North Louisiana continues to assume a more important role as a refining center and runs to stills this month again show an increase—from 45,050 bbls. daily to 46,800 bbls. During the past year this area has increased its number of operating plants from 9 to 12 and increased its total refining capacity from 49,950 bbls. daily to 71,450 bbls. daily. Crude runs to stills in September a year ago were 23,300 bbls. daily, only half of the present rate of operations. The near future should see the addition of another refinery in this area—that of the Ida Oil & Refining Co.—as articles of incorporation were filed recently by the company, which plans to build a small plant near Rodessa.

Arkansas, Oklahoma and North Central Texas all showed slight decreases and only minor changes in the operating schedules of the various refining companies. Allstate Refining Co.'s plant at Thrall will be closed down during the month thus accounting for the major part of the decrease in North Central Texas. The old Simms refinery at Smackover, Ark., which was recently purchased by the Lion Oil Refining Co., is now being dismantled and being moved into the Lion refinery at El Dorado.

Although refinery runs throughout the United States were at the highest point of all time during the last week of August and only 25,000 bbls. less during the first week of September, most refiners and those closely in touch with the industry feel that those weeks will be the season's peak and runs will gradually decline as the season of maximum consumption wanes. The Mid-Continent shared a good portion of these record-breaking crude runs to stills, accounting for approximately one-sixth of the total, so that the end of September should find runs slightly lower.

Rado Refining & Producing Co., operator of a refinery at McAllen, Tex., is doubling the capacity of its plant—the capacity now being 240 bbls. daily—and plan to have the new facilities in operation by November 1. One new refinery was added to the list this month, that of the West Texas Oil & Refining Co. at Sweetwater. The plant has a daily capacity of 40 bbls.

Estimated Daily Average Mid-Continent Refinery Crude Runs for September

ARKANSAS

Company and location—	Daily capacity	Av. daily runs Sept.	Av. daily runs August
Berry Asphalt Co., Waterloo	2,000	1,100	1,200
Henry H. Cross Co., Smackover	6,000	4,500	4,500
Lion Oil Ref. Co., El Dorado	12,000	9,000	9,000
Macmillan Pet. Corp., Norphlet	2,500	2,000	2,000
Ouachita Valley Ref. Co., El Dorado	2,500	(*)	(*)
Root Pet. Co., El Dorado	10,000	6,500	6,500
Stephens Ref. Co., Stephens	750	250	250
Total	35,750	23,350	23,450

*Shut down.

EAST TEXAS

Company and location—	Daily capacity	Av. daily runs Sept.	Av. daily runs August
Cascade Ref. Co., Reed Switch	2,000	1,840	785
Chief Ref. Co., Gladewater	2,000	700	140
Clay Ref. Co., Arp	2,500	1,380	835
Danciger Refineries, Inc., Longview	10,000	5,000	5,000
Dominant Ref. Co., No. 1, Kilgore	4,000	785	2,325
East Texas Ref. Co., Longview	10,000	8,000	7,660
General American Ref. Co. No. 1, Gladewater	4,000	2,795	3,425
General American Ref. Co. No. 2, Overton	5,500	2,910	3,425
General American Ref. Co. No. 3, Arp	4,000	1,760	1,690
Hurricane Pet. Corp., Overton	5,000	2,375	3,120
Hurricane Pet. Corp., Arp Ref., Arp	3,000	2,375	2,300
Lake Ref. Co., Gladewater	2,500	540	800
Master Pet. Co., Waco	1,000	(*)	(*)
Magnolia Pet. Co., Corsicana	5,000	4,000	4,000
Ocean Pet. Corp., Kilgore	3,000	2,300	1,820
Premier Oil Ref. of Texas, Willow Springs	4,000	3,000	3,000
Panama Ref. Co., Kilgore	3,000	410	1,500
Royal Oil & Ref. Co., Kilgore	3,000	575	1,400
Sinclair Ref. Co., Camp Switch	3,500	2,000	2,000
Solvex Refineries, Inc., Gladewater	4,500	2,580	2,290
Southport Pet. Co., Kilgore	5,000	1,745	3,000
Texas Co., The, Dallas	16,000	8,000	8,500
Texas Oil Products Co., Gladewater	3,000	1,760	1,295
Trinity Ref. Co., Gladewater	6,000	2,600	2,485
Tower Ref. Co., Overton	3,000	2,100	2,185
Tyler Texas Ref. Co., Tyler	10,000	1,360	2,770
Wabash Ref. Co., Gladewater	800	280	30
Total	127,800	63,170	67,780

*Shut down.

OKLAHOMA

Company and location—	Daily capacity	Av. daily runs Sept.	Av. daily runs August
Anderson-Prichard Oil Corp., Cyril	6,000	4,500	4,500
Barnsdall Oil Co., Barnsdall	6,000	3,200	3,500
Barnsdall Oil Co., Okmulgee	10,000	3,200	4,000
Bell Oil & Gas Co., Grandfield	4,500	2,460	2,800
Black Gold Ref. Co., Oklahoma City	3,000	2,000	2,000
Champlin Ref. Co., Enid	16,000	6,500	6,500
Continental Oil Co., Ponca City	30,000	19,000	20,000
Crescent Ref. Co., Holdenville	1,000	(*)	(*)
Cushing Ref. & Gasoline Co., Blackwell	1,700	1,600	1,600
Cushing Ref. & Gasoline Co., Cushing	6,200	2,500	2,500
Deep Rock Oil Corp., Cushing	10,000	9,000	9,000
Eason Oil Co., Enid	5,000	2,500	2,500
Empire Oil & Ref. Co., Okmulgee	4,000	2,500	2,420
Empire Oil & Ref. Co., Ponca City	12,000	9,000	8,710
Globe Oil & Ref. Co., Blackwell	8,000	4,500	4,500
Johnson Oil Ref. Co., Cleveland	6,000	4,200	4,300
Marathon Oil Co., Bristow	5,000	3,000	2,900
Mid-Continent Pet. Corp., West Tulsa	40,000	19,700	19,700
Monarch Ref. Co., Oklahoma City	2,000	800	800
Omar Ref. Co., Garber	8,000	2,500	2,500
Peppers Gasoline Co., Oklahoma City	500	200	200
Phillips Pet. Co., Okmulgee	6,000	4,800	4,840
Pure Oil Co., Muskogee	10,000	8,500	7,500
Rock Island Ref. Co., Beckett	6,000	2,500	2,500
Sinclair Ref. Co., Sand Springs	8,000	4,500	4,500
Sooner State Ref. Co., Oklahoma City	700	350	450
Sun Oil Co., Yale	5,000	2,000	2,000
Sunray Oil Co., Allen	7,000	3,340	4,000
Texas Co., West Tulsa	15,000	11,000	11,000
Tide Water Oil Co., Drumright	15,000	12,500	12,500
Triangle Prod. & Ref. Co., Oklahoma City	1,500	1,000	1,000
S. L. West Ref. Co., Oklahoma City	1,000	200	200
Wilcox Oil & Gas Co., Bristow	6,000	2,500	2,580
Yale Oil Corp., Yale	2,000	(*)	(*)
Total	268,100	156,050	158,000

*Shut down.

KANSAS

Company and location—	Daily capacity	Av. daily runs Sept.	Av. daily runs August
Barnsdall Oil Co., Wichita	6,000	4,500	3,500
Chase Ref. Co., Chase	1,000	550	550
Cusco Oil & Ref. Co., Chase	3,100	750	1,200
Derby Oil Co., Wichita	8,000	6,500	6,500
Dickey Ref. Co., McPherson	2,500	1,700	1,700
Eldorado Ref. Co., Eldorado	5,000	4,000	4,500
Falcon Ref. Co., Inc., Great Bend	800	650	650
Globe Oil & Ref. Co., McPherson	12,000	7,000	7,000
Kanotex Ref. Co., Arkansas City	12,000	7,500	7,500
Kansas Gasoline Co., Winfield	150	40	40
Kreuger Ref. Co., Laton	150	50	50
National Ref. Co., Coffeyville	8,000	5,500	5,500
Pet. Products Co., Chanute	1,000	800	800
Phillips Pet. Co., Kansas City	18,000	12,500	13,170
Russell Ref. Co., Russell	2,500	1,000	1,250
Shell Petroleum Corp., Arkansas City	20,000	18,000	20,000

Company and location—	Daily capacity	Av. daily runs Sept.	Av. daily runs August
Sinclair Ref. Co., Coffeyville	20,000	8,500	8,500
Sinclair Ref. Co., Argentine	11,000	7,000	7,000
Skelly Oil Co., Eldorado	23,000	17,500	19,000
Socony-Vacuum Oil Co., Inc., Augusta	16,000	15,000	15,000
Standard Oil Co., (Indiana), Neodesha	20,000	5,100	5,100
Vickers Pet. Co., Potwin	3,500	2,500	3,000
Total	193,700	126,640	131,510

*Shut down.

NORTH LOUISIANA

Acme Ref. Co., Monroe	100	50	50
Atlas Pipe Line Co., Shreveport	12,500	10,000	9,000
Bayou State Oil Corp., Hosston	750	350	450
Griswold Refineries, Shreveport	2,500	2,000	2,000
Griswold Refineries, Sandra	5,000	1,000	1,000
Louisiana Oil Ref. Co., Bossier City	25,000	20,000	20,000
North Caddo Refinery, Rodessa	1,000	500	400
Pelican Ref. Co., Converse	100	50	50
Rodessa Oil & Ref. Corp., Cedar Grove	7,500	3,600	3,600
Shoreline Oil Co., Lewis	5,000	4,250	4,000
Stanolind Oil & Gas Co., Superior	5,000	5,000	4,500
Texas Co., Shreveport	1,000	(*)	(*)
Total	71,450	46,800	45,050

*Shut down.

NORTH CENTRAL TEXAS

Allstate Ref. Co., Thrall	2,500	(*)	1,000
Baird Ref. Co., Baird	2,000	1,300	1,500
Canyon Oil & Gas Co., Inc., Cisco	500	(*)	(*)
Continental Oil Co., Wichita Falls	6,000	4,100	4,100
Crown Oil Co., Fort Worth	1,200	800	800
Exchange Pet. Corp., Albany	800	250	300
Falls Ref. Co., Wichita Falls	2,000	300	300
Gratex Ref. & Fuel Oil Co., Graham	500	300	300
Gulf Ref. Co., Fort Worth	10,000	5,600	5,300
Hightower Oil & Ref. Corp., Brownwood	750	150	150
Jacksboro Ref. Co., Jacksboro	50	50	50
La Salle Pet. Co., Burkburnett	3,500	900	900
Magnolia Pet. Co., Fort Worth, No. 1	12,000	6,000	6,000
Marathon Oil Co., Fort Worth	5,000	4,330	4,200
Norgold Ref. Co., West Olney	400	200	200
Olney Oil & Ref. Co., North Olney	3,500	1,800	2,000
Panhandle Ref. Co., Wichita Falls	4,000	2,400	2,420
Panhandle Ref. Co., Leuders	1,000	700	675
Pilot Point Ref. Co., Pilot Point	500	100	100
Sinclair Ref. Co., Fort Worth	5,000	3,000	3,000
Southland Ref. Co., Megargel	500	200	200
Taylor Ref. Co., Taylor	6,000	800	800
Taxman Ref. Co., Wichita Falls	3,500	2,500	2,700
Texas Pacific Coal & Oil Co., Caddo	1,000	700	700
Tucker Ref. Co., Wichita Falls	250	175	175
Wagoner Ref. Co., Electra	6,000	3,000	3,000
Total	78,450	39,655	40,870

*Shut down.

SOUTHWEST TEXAS

Amsco Ref. Co., Mirando City	4,500	3,150	3,500
Humble Oil & Ref. Co., San Antonio	5,000	3,000	3,000
Magnolia Pet. Co., Luling	8,000	7,350	4,500
Midway Oil & Ref. Co., Pettus	1,000	500	500
Pettus Ref. Co., No. 1, Pettus	1,000	600	800
Pettus Oil & Ref. Co., No. 2, Pettus	1,000	600	500
Pettus Ref. Co., Mathis	1,000	600	500
Phoenix Ref. Co., San Antonio	1,200	1,100	1,200
Phoenix Ref. Co., Bruni	900	450	400
Pioneer Oil & Ref. Co., Somerset	2,000	1,300	1,200
Rado Ref. & Prod. Co., McAllen	500	240	230
Texas Co., San Antonio	3,000	3,000	3,000
Valley Ref. Co., Huntington	1,000	180	60
Total	30,100	22,070	19,390

*Shut down.

WEST TEXAS AND PANHANDLE

Aero Ref. Co., Pecos	200	100	100
Coltex Ref. Co., Colorado	12,500	8,000	8,000
Concho Ref. Co., San Angelo	250	100	100
Cosden Oil Co., Big Spring	12,500	12,500	12,000
Danciger Refs., Inc., Pampa	6,500	5,000	5,000
Gibson Oil Corp., Magic City	250	150	150
Gulf Ref. Co., Sweetwater	7,500	5,500	5,090
Hill Ref. Co., Ballinger	100	(*)	(*)
Howard County Ref. Co., Big Spring	1,500	600	700
McNutt Ref. Co., El Paso	2,000	750	750
Moutray Oil Co., Hawley	1,200	900	900
Onyx Refining Corp., Hawley	1,200	1,200	1,000
Panhandle Ref. Co., Kings Mill	2,000	1,600	1,550
Phillips Pet. Co., Borger	50,000	21,000	20,160
Shamrock Oil & Gas Corp., Sunray	2,500	2,000	2,500
Shamrock Oil & Gas Corp., Meldavis	1,600	1,500	1,500
Standard Oil Co. of Texas, El Paso	14,000	7,400	7,500
Starlight Ref. Co., Ballinger	500	(*)	(*)
Texas Co., El Paso	2,000	1,000	1,000
Texas Co., Amarillo	4,000	3,000	3,000
West Texas Oil & Ref. Co., Sweetwater	40	30	(*)
Wickett Pet. Co., Wickett	2,500	600	600
Total	124,840	72,930	71,600

*Shut down.

Many Outstanding Authorities to Speak Before the A.I.M.E.

The Petroleum Division of the A.I.M.E. will hold the second fall meeting at Blackstone Hotel, Fort Worth, Tex., October 8 and 9. President John M. Lovejoy plans to be there. The technical program deals with problems in drilling, production, metallurgy, economics, engineering education and research. The majority of papers scheduled deal with production problems.

THURSDAY MORNING, OCTOBER 8

Drilling

"Heaving Shale," by Paul Weaver, Gulf Oil Corp., Houston, Tex.

"Mud Fluid," by W. V. Vietti, Texas Co., Houston, Tex.

"Some Features of Pressure Control While Drilling," by John Farmer, Otis Pressure Control, Inc., Dallas, Tex.

THURSDAY AFTERNOON, OCTOBER 8

Production

"Control of Water in Pumping Wells," by J. J. Zorichak, Stanolind Oil & Gas Co., Tulsa, Okla.

"The Sucker Rod Pump as a Problem in Elasticity," by J. F. Kendrick, Sullivan Machinery Co., Chicago, Ill.

"Increase of Permeability of Sand for Oil Relative to Water," by W. V. Vietti and A. D. Garrison, Texas Co., Houston, Tex.

"The Use of Data on the Build-Up of the Bottom-Hole Pressure or Rise of the Fluid Level in Pumping Wells in Determining the Production Capacity of the Well and the Reservoir Pressure," by Morris Muskat, Gulf Research Corp., Pittsburgh, Pa.

"Connate Water in Oil Sand."

"The Productivity Index," by M. L. Haider, Carter Oil Co., Tulsa.

"Results of Recent Experiments on Radial Flow of Fluids Through Oil Sands and Their Bearing on Production Problems," by Prof. F. B. Plummer, University of Texas, Austin, Tex.

FRIDAY MORNING, OCTOBER 9

Engineering Education

"Petroleum Engineering Education," by Prof. L. C. Uren, University of California, Berkeley, Calif.

"Cooperative Education for the Petroleum Industry," by Dean R. L. Langenheim, University of Tulsa, Tulsa.

"Employment of Young Engineers," by John Suman, Humble Oil & Refining Co., Houston, Tex.

Metallurgy

"Status of Steel and Alloy Steel Tubing in Oil Refinery Heat Exchanger Practice," by H. M. Wilten, Texas Co., Port Arthur, Tex.

"A New Method of Rendering Ferrous Metals Heat, Corrosion and Wear Resistant by Impregnation with Silicon," by H. K. Ihrig, Globe Steel Co.

Research

"Review of Research Activity."

FRIDAY AFTERNOON, OCTOBER 9

"Diminishing Allowable per Well," by W. E. Hubbard, Humble Oil & Refining Co., Houston, Tex.

"Acreage and Potential Factors in Allocation," by Eugene A. Stephenson, Missouri School of Mines and Metallurgy, Rolla, Mo.

"Estimation of Oil and Gas Reserves," by R. L. Huntington, University of Oklahoma, Norman, Okla.

"Well Spacing and Ultimate Gas Recovery per Acre," by D. R. McRoberts, United Gas Co., Houston, Tex.

The officers of the Petroleum Division are: Chairman, Hallan N. Marsh; associate chairman, M. Albertson; secretary-treasurer, Eugene A. Stephenson; production engineering, L. L. Foley; production, J. Terry Duce; engineering research, J. T. Hayward; economics, Sidney A. Swensrud; refinery engineering, Walter Miller; Earl Oliver is chairman of the stabilization committee.

TWO OF THE CREWS WHO DRILLED HOPKINS COUNTY, TEXAS, DISCOVERY WELL

Left to right: D. L. Nowlin, pipe racker; R. R. Shelton; Hawk Lynn, derrick man; R. Baxter, driller

Top: B. A. Doster, helper; L. M. Jernigan, derrick man; C. C. Woodall, driller. Lower: J. F. Hamby, fireman; J. C. Owens, helper

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FIELD OPERATIONS

Summarizing the Week's Developments

The Second Wilcox sand in the Crescent pool in Logan County, Oklahoma, yielded another tremendous initial producer in the past week when a well of the Carter Oil Co. and Gulf Oil Corp. flowed 8,085 bbls. in 3 hours, earning a potential rating of 64,680 bbls. per day. The 3-hour flow exceeded all records for the same length of time in Oklahoma. The Crescent pool is not large in area, but the deep pay is most remarkable in saturated richness.

The Oklahoma City field passed the 344,000,000-bbl. mark in crude oil output on September 7, making it the most productive single pool in Oklahoma.

TEXAS

The discovery of a new oil field in St. Mary Parish, Coastal Louisiana, was confirmed; a new oil pool was opened in the Hughes gas field in Victoria, Coastal Texas, and several Texas Coast pools were extended. In Southwest Texas a pool was opened in Willacy County, the first oil discovery in that county. The discovery well started at 232 bbls. of 58 gravity crude through a quarter-inch choke, producing from the deepest known sand in the Southwest fields.

The second well in the Sulphur Bluff field in Hopkins County began showing salt water and has been plugged back to get a shut-off. One producing well in the Talco field also began to show salt water. Five good wells were completed in the Talco field in the past week.

The important deep test in the Camp Hill area in Anderson County has been abandoned as hopeless at 8,383 feet.

It was a dull week in East Texas where only 27 new wells were completed five of which were put on the pump. The initial production was only about 30 bbls. per well on short time initial flow.

An important oil showing in Dawson County in the West Texas division was a feature, together with the proof of production below the sulfur water line in a test in western Crane County. After it was acidized the latter test made 415 bbls. in 1 hour, with gas at the rate of 5,687,000 feet per day. A much discussed test 5 miles northeast of Denison, Grayson County, has been abandoned at 5,774 feet because of hole trouble. It had not reached its contract depth and leaves the question of oil in that area still debatable.

LOUISIANA—TEXAS

Rodessa has had its first dry hole since the field was discovered and it was on the Cass County side of the field 3½ miles north of the assumed position of the Rodessa fault line. It was drilled to 6,042 feet and tested all four zones of the Lower Glen Rose. The Rodessa field produced an average of 69,840 bbls. per day in the past week of which 59,605 bbls. was reported on the Louisiana side and 10,235 bbls. on the Texas side. Great interest is being taken in the wildcatting campaign in North Louisiana and East Texas border counties. New sand members of the Travis Peak are the objective and plans are being laid for additional tests. Rodessa completions are coming in conservatively, the initial production in the past week ranging from 20 bbls. up to 447 bbls. the first hour.

KANSAS

Saline County, Kansas, which lies just north of McPherson County, looms as a commercially productive area, a wildcat 27 miles from production showing saturation in a 100-foot section of Viola lime, and the bailer having brought up 7 bbls. of oil per hour over a 3- or 4-hour period. The oil is black and exceeds 32 degrees in gravity.

Completions in All Fields

(Week Ending September 12, 1936)

	Oil	Gas	Dry	Total	1936 total comp. to date	1935 total comp. to date
Penna. Grade Fields	69	12	15	96	2,265	2,022
Lima Field	1	1	3	5	62	70
Central Ohio	1	3	4	8	236	235
Indiana	2	1	2	5	128	148
Illinois	0	0	0	0	24	11
Michigan	7	4	6	17	429	350
Kentucky	9	0	1	10	175	169
Kansas	27	3	6	36	1,141	869
Oklahoma	36	0	13	49	1,741	1,426
North Central Texas	40	1	37	78	1,821	1,872
West Texas	32	0	2	34	1,041	559
Texas Panhandle	14	2	0	16	469	499
East Central Texas	11	0	2	13	235	178
East Texas	27	0	3	30	1,862	3,298
East Texas border	4	0	0	4	51	8
Gulf Coast Texas	22	1	10	33	813	703
Southwest Texas	44	2	13	59	2,014	1,108
Total Texas	194	6	67	267	8,308	8,225
North Louisiana	9	3	2	14	456	214
Gulf Coast Louisiana	4	0	2	6	255	259
Total Louisiana	13	3	4	20	711	473
Arkansas	0	0	1	1	66	91
Montana	8	1	2	11	160	122
Wyoming	3	1	2	6	69	53
Colorado	0	0	0	0	20	9
New Mexico	8	0	3	11	416	219
Utah	0	0	0	0	5	6
California	18	0	13	31	850	781
Total United States	396	35	142	573	16,804	15,279
Total previous week	371	52	96	519		
Difference	25	17	46	54		

Outstanding Fields—Highlights

(Week Ending September 12, 1936)

FIELD—	Rigs up	Wells drlg.	Weekly oil completions	Initial prod.	Total No. oil wells	Daily av. prod.
TEXAS						
Anahuac	4	8	1	480	111	8,979
Hastings	2	4	2	1,070	94	6,810
Loma Novia	6	14	9	1,130	566	14,937
Seven Sisters	4	10	7	1,136	271	6,879
Saxet Heights	8	13	7	867	160	8,312
Saxet	9	12	8	1,503	201	15,479
East Texas	31	117	27	*790	21,340	439,598
Talco	20	27	5	688	54	5,990
OKLAHOMA						
Oklahoma City (capitol area)	4	23	0	0	138	39,162
Oklahoma City (old field)	0	2	0	0	951	97,088
Fitts	11	42	6	14,982	428	62,375
Burbank-S. Burbank	2	10	2	4,961	2,159	22,300
KANSAS						
Ellis County	5	30	0		49	2,754
Reno County	4	22	4	2,436	319	16,931
Russell County	5	39	5	9,201	461	20,207
Rice County	4	41	5	8,668	567	35,627
NEW MEXICO						
Lea County	9	75	6	3,314	957	75,150
LOUISIANA—TEXAS						
Rodessa, La.	4	35	5	5,040	277	59,605
Rodessa, Tex.	6	36	4	4,503	44	10,235
Gillis, La.	2	3	0	0	50	15,787
Tepetate, La.	2	3	1	235	26	4,961
MICHIGAN						
Porter-Yost	1	15	2	126	399	16,933
Crystal-Montcalm	4	16	1	120	138	4,817

*One-hour gauges.

Eastern Field Report

By STAFF CORRESPONDENT

DEEP TEST IN WIRT COUNTY NEWEST IN WEST VIRGINIA

PITTSBURGH, Pa., Sept. 14.—Another interesting deep test has started in West Virginia. In Burning Springs district, Wirt County, Glen Roberts and others have started drilling on the Roberts Oil Co. (L. R. and J. A. Roberts) farm and it is scheduled for the Oriskany sand. It is on the crest of the Burning Springs anticline known for its prolific oil pools from the earliest days. Southeast of this, Godfrey L. Cabot, Inc., is down 1,000 feet in a deep test on the Julia Blankenship farm in the same district east of Creston and near the trough of the Middlebourne syncline. Both tests will be the first on these structures in this section.

The deep test of William Snee and others on the Summit Hotel property on Chestnut Ridge in South Union Township, Fayette County, Pennsylvania, is still uncased. After the casing struck an obstruction at 4,552 feet which collapsed the shoe and was pulled, a spiral bit and stem was run in the hole to straighten it. The tools are now working at 4,200 feet where the hole has bridged. There is also the obstruction at 4,552 feet and another bridge at 5,800 feet. After the upper two bridges are cleared three joints of 7-inch O.D. casing will be lowered in the hole on the cable to see if they will clear down to 5,800 feet and, if not, three joints of 5-inch will be tried. The rig is equipped with calf wheels for handling the casing so the tools may be run to clean as the casing is lowered.

Routine completions totaled 34 during the week in the lower Eastern fields. Thirteen were dry holes, 12 gas wells and 9 producers with an initial production of 121 bbls. Most of the new work was in Southeast Ohio.

SOUTHEAST OHIO

In Athens County, Mosher, Carpenter and Glazier drilled a well on the Lena S. Bean and John Smith farm, SE quarter of section 13, Ames Township, in the First Cow Run sand at 333 feet which will be used for gas repressuring. In the same quarter, Carpenter and Glazier drilled No. 12 on the John Smith farm in the Peeker sand at 103 feet and it was dry.

In Coshocton County, Preston Oil Co. completed No. 4 on the Cary D. Harris farm, SW quarter of section 17, Perry Township, in the Clinton sand at 3,178 feet. It will make about a 20-bbl. pumper.

In Holmes County, S. J. Bell and others drilled on the Harry C. Logsdon farm in section 12, Mechanic Township, through the Berea sand to 920 feet. It was dry.

In Monroe County, F. O. Parks drilled on the Clara B. Lynch farm in section 6, Bethel Township, through the Squaw sand to 1,714 feet. It was dry. In the same section, Ohio Fuel Supply Co. drilled on the John F. McCauley farm through the same formation to 1,701 feet. It was also dry.

In Noble County, Barnesville Development Co. completed a test on the James Danford farm, SW quarter of section 7, Jackson Township, in the Berea Grit at 1,560 feet. It produced 3 bbls. the first day after shot and after it is cleaned out is believed good for about 4 bbls.

In Perry County there were several completions. In the SW quarter of section 36, Thorn Township, Wehrle Co. completed a second test on the Homer Beard farm in the Clinton sand at 2,820 feet, gauging 2,000,000 feet before shot and there was no showing of oil. In the SW quarter of section 17, Clayton Township, Preston Oil Co. completed a test on the Griffith heirs farm in the Clinton sand at 3,423 feet, showing 40 bbls. and 100,000 feet of gas before shot. It will be shot this week.

In the shallow sand district of Perry County, Thistle Oil Co. completed No. 13 on the Carlos C. Stotler farm, SE quarter of section 28, Monroe Township, in the Berea sand at 1,029 feet, good for 8 bbls. after shot. In the NE quarter of section 33, Pleasant Township, C. L. Bullock and others completed No. 6 on the Thomas and Mary Munahan farm through the Berea sand at 1,080 feet as a dry hole.

In Washington County, Peter and Paul Schwenderman completed a test on the J. A. Schwenderman farm, Lot 5, Adams Township, in the Macksburg 500-foot sand at 1,341 feet. It had only a showing, natural, and 24 hours after shot produced a half barrel. One and a half miles north of Barlow in section 23, Barlow Township, D. T. Orndoff drilled on the Robert Hayes farm through the same formation to 1,002 feet and it was dry. One and a half miles west of Wolf Creek in Lot 1,073, Palmer Township, Charles D. Mosher and others drilled a second test on the Mattie A. Lightner farm through the First Cow Run sand to 541 feet. It was also dry. About a half mile west of this creek in the same lot, Helen J. Burt drilled a second trip on the Harvey Pugh farm through the First Cow Run sand to 442 feet. It was dry. Three miles west of Barlow in Lot 776, Warren Township, Ray Dewitt and others drilled on the Munn Fisher farm through the First Cow Run sand which was 675 feet deep and it was dry.

SOUTHWEST PENNSYLVANIA

In South Franklin Township, Washington County, South Penn Oil Co. completed a test on the J. B. Thompson (Piedmont Coal Co.) farm in the Fifth sand as a fair producer. After packing off a volume of about 750,000 feet of gas in the Fourth sand, the Fifth sand was at 3,028-39 feet with oil at this pay and the second pay at 3,046-48 feet. It rose 2,500 feet in the casing and is estimated good for 35 bbls. This is the most southern producer on the Fifth sand streak and appears to extend production a mile.

In this pool the following wells are drilling: A. V. Lewis and others are down 540 feet in a second test on the W. Dodd farm and have a rig on the Mankey farm. Union Gasoline & Oil Corp. is reaching the oil pay in the Fifth sand in the A. O. Vankirk farm. The Fifty-Foot sand was at 2,667-2,762 feet with some gas at 2,695-2,722 feet. On the Marion C. Johnson farm this company is drilling at 720 feet and on the Stephen B. Dayfarm at 2,055 feet. At the north end of this pool the company is rigging up on the Martha Hazlett farm about where the discovery well came in. Bloom & Co. are down 620 feet in No. 2 on the Clyde Hinerman farm. Moore-Orrill & Co. have a rig for No. 8 on the G. L. Walker farm. Six of the seven were producers and there was one dry hole on the west side.

In Morris Township, Washington County, Moore-Orrill & Co. (West Amity leases) drilled on the Young farm through the Fifth sand and it was dry. The Gantz and Fifty-Foot sands were at 2,762 feet with an oil shot at 2,815-17 feet.

In Morris Township, Greene County, Penn Ohio Oil & Gas Co. deepened the test on the Harry Glutter farm to 2,837 feet. The Gordon Stray sand was at 2,778-2,823 feet with oil, gas and water at 2,803 feet. It is making about 8 bbls. of oil a day along with plenty of water, and will be produced.

In Springhill Township, Greene County, J. H. McNichols & Co. completed a second test on the J. W. McNichols farm at 3,400 feet, the Fifty-Foot sand, gauging 94,000 feet.

In Greene Township, Greene County, Equitable Gas Co. is building a rig on the Dr. A. R. Core farm. On the Blanche Haines farm in Perry Township, this company is drilling at 2,800 feet. On the John farm, it is drilling at 3,270 feet with gas at 3,242-44 feet which blew down to about 150,000 feet a day.

In Dunkard Township, Convex Glass Co. is drilling at 2,995 feet on the Leroy McLarnan farm. In Aleppo Township, Cochran and Cochran are drilling at 2,570 feet on the Nancy Riggs farm. In Wayne Township, H. D. Freeland & Co. have startdrilling No. 3 on the D. L. Freeland farm. In Franklin Township, Manufacturers Light & Heat Co. is down 2,180 feet on the A. L. Moredock test.

In Center Township, Greene County, Carnegie Natural Gas Co. is drilling at 3,050 feet on the J. W. Milliken farm and in Richhill Township at 2,040 feet on the W. O. Kincaid farm. In Amwell Township, Washington County, this company is down 560 feet on the R. M. Carrons farm and 1,065 feet on the N. B. Redd farm.

Deep Tests

In Mount Pleasant Township, Washington County, the deep test of Norwood Johnston and others on the James McBurney farm is shut down at 6,100 feet waiting on a new line.

In Slippery Rock Township, Lawrence County, Carnegie Natural Gas Co. is drilling the deep test on the Heickel farm at 360 feet. One mile north of Zelienople, Butler County, the Wittmer-Phillips test on the Paul Franker farm is drilling, and in Independence Township, Beaver County, the Laughner-Wittmer test is drilling.

WEST VIRGINIA

Two small producers were completed in West Virginia. In Tyler County, Lawson Farm Oil Co. completed a second test on the Bessie Lawson farm in Meade district in the Injun sand at 1,776 feet, making 3 bbls. a day with a fair volume of gas.

In Wood County, I. M. Adams, trustee, completed No. 4 on the John L. Leonhart farm in Walker district in the Maxon sand at 1,570 feet, showing for 3 bbls.

Gas Wells

In Braxton County the Pittsburgh & West Virginia Gas Co. completed No. 7,587 on the M. E. Ramsey farm in Birch district, with gas at 1,984 feet; shale 2,118-27 feet with gas at 2,121 feet. After a 30-quart shot, it gauged about 250,000 feet.

In Cabell County, Kentucky West Virginia Gas Co. completed a test on the Nando Johnson farm in McComas district as a gas well in the Brown shale, gauging 450,000 feet a day at 3,120-3.325 feet. The company completed a test on the J. B. Bailey farm gauging 77,000 feet a day from the shale at 2,690-3,350 feet, total depth 3,371 feet.

In Guyandotte district, Cabell County, Merrits Creek Gas Co. completed a test on the Huntington Orchards Co. tract, total depth 3,239 feet, gas gauging 200,000 feet at 3,200 feet.

In Gilmer County, Hope Construction & Refining Co. completed No. 7,743 on the F. R. Beall farm in Center district as a gas well in the Injun sand at 2,100 feet, with 260,000 feet before shot at 2,070-75 feet and 2,082-90 feet.

In Kanawha County, Godfrey L. Cabot, Inc.,

(Continued on Page 67)

California Field Report

By
L. P. STOCKMAN

SECOND STEVENS POOL TEST MAKES PROMISING SHOWING

LOS ANGELES, Calif., Sept. 14.—Shell Oil Co. is expected to complete its second well in the Stevens or Ten Section field of Kern County within the next few days as No. 6-A on Kern County Land Co. property is showing up exceptionally well. This well, located a short distance southwest of Shell's discovery well, blew in prematurely a few days ago while the crew was making a water shut-off test and flowed mud, gas and oil for six hours. Upon being brought under control it showed a pressure of 350 pounds on the tubing and 1,020 pounds on the casing. No. 6-A is in section 29-30-26 and at the time of the blow-out was bottomed at 7,780 feet, with a 9⅝-inch water string cemented at 7,760 feet. Standard Oil Co.'s test in the Ten Section field, No. 10-1 in section 20-30-26, should reach the depth at which the pay is anticipated within another few weeks and is drilling at 5,655 feet. Standard has started rig construction for a second test, No. 9-1 in section 34-30-26, scheduled to be spudded in before the close of September.

In the Rio Bravo district of Kern County, north of the Ten Section field, Associated Oil Co. and Standard Oil Co. are making normal progress with their respective wildcats, located on property leased from the Kern County Land Co. The former's No. 1 K.C.L. is in section 30-29-25 while the latter's well is in section 19-29-26. Ohio Oil Co., which recently abandoned a deep dry hole in the Rio Bravo district, has a rig up for a second wildcat, No. 1-E in section 19-30-26. The Reserve Oil & Gas Co. had a fishing job in its Tejon district wildcat in section 33-11-19 and the production test will be delayed. The preliminary production test was rather disappointing and it was decided to clean out. The liner parted and left about 100 feet of pipe in the hole. This well swabbed 150 bbls. of relatively clean 22.5 gravity oil from 4,474 feet but the failure of the well to flow will necessitate pumping equipment.

Playa Del Rey

Superior Oil Co. is making preparations to start a well on the Del Rey Palisades near Loyola University and should begin making hole within a week. The company has about 1,000 acres of potential oil land under lease in this area and will proceed to test it out at once. This acreage was acquired a short time after the Eastern Oil Co. logged oil sand in its wildcat located about 1 mile east of the Playa Del Rey field, but development has been held in abeyance pending the outcome of drilling operations on the Eastern's test. The latter well has failed to come up to expectations as it is at present flowing mud and water. Superior made a deal with the Eastern interests some time ago and did go into the wildcat in question but could not do anything with the well due to mechanical defects which appear to be almost insurmountable. Superior geologists believe that the company's new wildcat is on the same structure as the Eastern Oil Co.'s test.

Over in the Rosecrans fields of Los Angeles Basin, Republic Petroleum Co. has completed its No. 1 Trust pumping 101 bbls. of clean 36.1 gravity oil and 40,000 feet of natural gas per day from 5,923 feet. It was originally carried down to 6,141 feet but the bottom of the hole failed to yield commercial production and it was plugged off. Production was secured by perforating the 4¾-inch casing between 5,883 feet and 5,925 feet, as this string of pipe had been cemented through perforations at 6,051 feet.

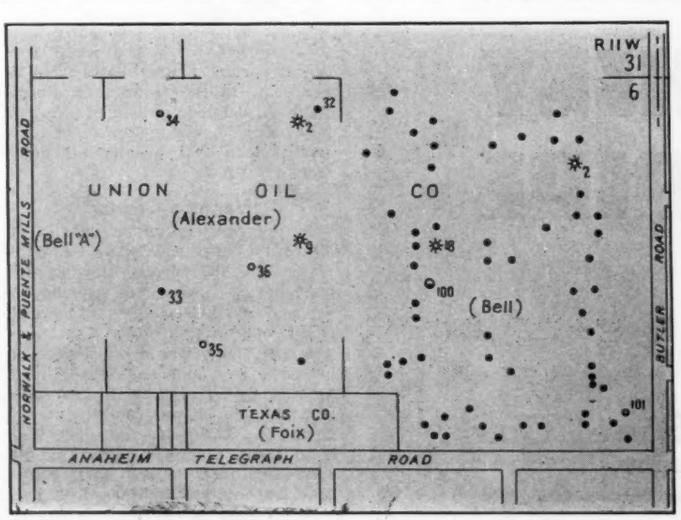
In the Montebello extension Richfield Oil Co. completed No. 1 Pasadena doing 345 bbls. of 37.4 gravity oil per day from 5,615 feet. This well failed to flow and it was completed on a compressor. Production is showing a cut of about 50 per cent but the well will be allowed to remain on production as there does not seem to be much chance of producing clean oil from this location. St. Helens Petroleum Co. No. 7 P. & B. dropped off to such an extent that the company was obliged to put the well on a compressor and production was increased to 515 bbls. per day. The Universal Consolidated failed to effect a satisfactory water shutoff on its No. 2 Pasadena in this field and the 7-inch water string has been recemented at 5,538 feet. Wilshire Oil Co. No. 1 Montebello, also in the eastern extension of the Montebello field, blew in as a gas well after the hole had been cleaned out 5 feet below the shoe on the 6⅝-inch at 6,840 feet. The 10,000,000 feet of natural gas produced might prove to be a good omen as the chance of getting oil production with deeper drilling appears to be fairly promising.

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	August 30		August 23			
	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Intercoastal-domestic:						
Diesel and gas oil	.....	.....	.....	.....	151,541	527,098
Gasoline	.....	.....	117,346	16,764	4,630,645	5,510,836
Kerosene	.....	.....	.....	.....	888,702	753,457
Foreign exports:						
Crude oil	435,725	62,246	209,309	29,901	6,484,947	9,243,303
Fuel oil	106,221	15,174	368,190	52,599	6,775,846	8,395,370
Diesel and gas oil	206,463	29,495	134,832	19,262	3,966,891	3,168,622
Gasoline	77,394	11,056	133,389	19,056	4,911,864	4,669,771
Kerosene	3,820	546	.....	.....	1,042,525	850,953
Other unfinished oil	.....	.....	20,120	2,874	132,908	99,847
Coastwise-domestic:						
Crude oil	145,287	20,755	41,792	5,970	4,418,992	3,805,642
Fuel oil	342,068	48,867	102,595	14,656	6,855,316	6,578,254
Diesel and gas oil	.....	.....	.....	.....	854,941	622,928
Gasoline	231,375	33,054	84,781	12,112	8,666,440	7,717,652
Kerosene	.....	.....	.....	.....	137,977	140,436

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic:						
Diesel and gas oil	.....	.....	.....	.....	.....	158,152
Gasoline	.....	.....	.....	.....	227,419	.....
Kerosene	.....	.....	.....	.....	.....	149,715
Asphalt	.....	.....	.....	.....	138,097	420,414
Lubricants	4,047	578	.....	.....	38,131	42,007
Foreign exports:						
Crude oil	60,240	8,606	.....	.....	2,228,219	1,691,544
Fuel oil	.....	.....	136,978	19,568	1,931,981	1,510,331
Diesel and gas oil	58,046	8,292	168,477	24,068	1,334,870	804,512
Gasoline	.....	.....	.....	.....	2,425,429	2,045,085
Kerosene	.....	.....	69,594	9,942	529,323	587,495
Lubricants	3,780	540	37,377	5,340	244,326	152,500
Other unfinished oil	.....	.....	90,923	12,989	90,923	.....
Coastwise-domestic:						
Fuel oil	158,444	22,635	178,398	25,485	4,578,912	4,538,192
Diesel and gas oil	1,501	214	.....	.....	480,840	175,932
Gasoline	76,490	10,927	63,033	9,005	3,359,566	3,161,080
Kerosene	.....	.....	.....	.....	102,798	70,639



The Santa Fe Springs field of Los Angeles Basin is still showing a surprising amount of drilling several years after its discovery

Round Mountain

The Honolulu Oil Corp. completed two new wells and began drilling operations on two more. No. 18-J in section 18-28-29 was brought in pumping 227 bbls. of clean 16.4 gravity oil per day from 1,954 feet after the hole had been plugged back from 1,992 feet. No. 20-12, in section 20-28-29, was finished on the beam doing 738 bbls. of clean 16.4 gravity oil per day from 1,910 feet. The company's field department is rather proud of these two completions because they were expected to show a water cut somewhere in the neighborhood of 15 per cent due to their location near the edge of the structure. The clean production secured is due to excellent drilling and careful selection of just the right amount of producing formation. In the Kern River front, General Petroleum Corp. completed No. 10 Wetmore in section 14-28-27 pumping 125 bbls. of relatively clean 15.1 gravity oil daily from 1,936 feet after the hole had been plugged back from 2,025 feet and finished with an 8⅝-inch liner carrying 181 feet of perforated. Associated is making a production test on No. 21 in section 23-28-27 but the well is still pumping to sump and consequently no gauge is available at the present time.

In the Fruitvale field of Kern County, Western Gulf Oil Co. successfully completed No. 2 West in section 21-29-27 and this new well was finished flowing 601 bbls. of clean 23.9 gravity oil per day from 3,937 feet. No. 1 Fruitvale of Oil, Inc., came in flowing at the rate of 1,200 bbls. of fluid per day, 99 per cent water. This well was bottomed at 3,389 feet and has an 8⅝-inch water string cemented at 3,289 feet. The presence of such a large amount of water appears to be due to the fact that the water string was landed and cemented too high up in the hole. That the company has not lost faith in its lease is evidenced by the fact that preparations are under way to start a second test. White & Haar No. 1 Scheel in section 28-29-27 has been completed pumping 151 bbls. of 21.7 gravity

oil per day from 4,395 feet after plugging back the hole from 4,710 feet. Elbee Oil Co. No. 1 Bitner in section 23-39-27 blew out after the 6⅝-inch had been perforated at 3,793-3,805 feet and it required 90 minutes to bring it under control.

Midway-Sunset

Union Oil Co. added two completions to its list of producers in the Midway-Sunset field within the past few days when No. 2 Keene was brought in pumping 452 bbls. of clean 16.2 gravity oil per day and No. 9 Lakeview was finished pumping 260 bbls. of clean 26.1 gravity oil daily. The former was bottomed at 2,005 feet and finished with a 6⅝-inch liner including 426 feet of perforated while the latter, redrilled and deepened to the Lakeview sand, was completed at 2,837 feet and finished with a 4½-inch liner carrying 170 feet of perforated. Chanslor Canfield Midway Oil Co. No. 18-21 in section 21-32-23 was good for 330 bbls. of 16.6 gravity oil per day from 2,153 feet and Otis Hoyt No. 3 Maricopa in section 7-11-23 showed an initial production of 274 bbls. from 1,796 feet. Standard Oil Co. is putting the finishing touches on No. 18 Monarch in section 26-12-24 and is preparing to deepen No. 3-25-L in section 25-12-24.

Mount Poso

In the Mount Poso field of Kern County Shell Oil Co. completed No. 27 Vedder in section 9-27-29 pumping 485 bbus. daily of clean 14.5 gravity oil from 1,765 feet. A water shutoff was effected in No. 28 Vedder in the same section and it should be tanking oil within a few days. No. 29 Vedder is delayed with mechanical trouble but this should be cleaned up shortly and the well passed for production within the next 10 days. Out in the Premier area, Rex Oil Co. No. 1 Maybry in section 4-28-27 ran into a gray sand at 2,804 feet and operations have been suspended. It cored oil sand at 2,396-2,408 feet but this zone and the Santa Margarita which was topped at 2,751 feet proved unproductive.

In the Mountain View field, which appears to be rather definitely headed for a lower level although periodic completions may retard normal decline from time to time, Shell Oil Co. has completed No. 2-10 Porter in section 32-30-29, pumping 187 bbls. of 27.6 gravity oil per day from 5,916 feet. The company has spudded in No. 2-11 Porter. Fullerton Oil Co. made a formation test on No. 1 Bloemer in section 18-30-29 and recovered 10 stands of mud and water but no oil with the tester open 60 minutes. It is being abandoned at 5,373 feet.

Richfield

Union Oil Co. added a new well to its list of producers in the Richfield district by completing No. 34 Chapman, pumping 180 bbls. of relatively clean 18.1 gravity oil per day from 3,475 feet. Union's deep test in this field. No. 29 Chapman, is nearing the 7,300-foot level, but has not yet encountered the deep zone which was expected around 6,000 feet. In the Santa Fe Springs field, the company completed No. 33 Alexander, pumping 146 bbls. of 30.2 gravity oil per day from 4,040 feet after the hole had been plugged back from 4,076 feet. Union Oil Co., which has been pursuing a rather aggressive drilling campaign in the Santa Fe Springs field, is starting several new wells on the Bell and Alexander leases. In the Seal Beach field of Los Angeles Basin, Associated Oil Co. recompleted No. 18 Hellman pumping 77 bbls. of 31.0 gravity oil cutting 50 per cent water from 6,599 feet after the hole had been plugged back from 6,605 feet. Continental Oil Co. No. 39 Bixby in this field should be tanking oil within a few days as 615 feet of blank liner has been landed and cemented at 6,445 feet and will be perforated at once.

Black Gold Oil Co. completed its first commercial producer in the eastern extension of the Torrance field of Los Angeles Basin pumping 144 bbls. of 15.6 gravity oil per day from 3,720 feet after the hole had been finished with a 4½-inch liner carrying 387 feet of perforated. Petrol Corp. No. 3 Simmons was good for 175 bbls. of 16.1 gravity oil per day from 3,590 feet after the hole had been finished with a 6⅝-inch liner including 390 feet of perforated. The relatively small production secured by these wells in view of the large amount of productive formation indicates the depleted condition of the zone in the Redondo section of the field. The water content in both wells was approximately 8 per cent, which is somewhat below the usual percentage, which approximates 12 to 15 per cent. In the Huntington Beach field Associated completed No. 53 Miley-Keck, pumping 76 bbls. of relatively clean 28.1 gravity oil daily from 4,380 feet.

Ventura County

In the Shiells Canyon district of Ventura County the Texas Co. completed No. 130 Shiells, flowing 645 bbls. of 28.4 gravity oil cutting 15 per cent and 1,500,000 feet of natural gas per day after a series of mechanical operations. The hole is bottomed at 4,242 feet and has an 8⅝-inch liner cemented at 3,726 feet. A 6⅝-inch blank liner was landed and cemented at 3,580-4,242 feet. The 6⅝-inch blank liner was perforated at 3,688-3,700 feet, 3,732-50 feet, 3,580-3,878 feet and at 3,980-4,000 feet. The 8⅝-inch liner carries perforations at 3,275-3,300 feet. The Texas Co. No. 131 Shiells which blew in several weeks ago flowing through a formation tester is still flowing under the same conditions although current production has dropped to 61 bbls. of exceptionally clean 31.8 gravity oil and 183,000 feet of natural gas daily. In the Elwood field of Santa Barbara County, Barnsdall-Rio Grande picked up the top of the Sespe in No. 1 Luton-Bell at 3,487 feet and preparations are under way for an early production test. This is the discovery well in the Elwood field and it is interesting to note that the top of the Vaqueros formation was logged at 3,163 feet and that the well has been on production practically ever since its completion although recent production has been negligible.

In the Santa Maria district, Union Oil Co. recompleted No. 13 Squires pumping 95 bbls. of clean 26.1 gravity oil per day after redrilling and deepening the hole to 4,123 feet. In the Santa Maria Valley field Union is rotating ahead in No. 1 Mahoney at 3,004 feet and a string of 8⅝-inch has been landed and cemented as a water string at 2,995 feet. The Bush-Hancock joint test on the Brown lease is down 4,125 feet but appears to be running considerably deeper on the structure than the Union Oil Co.'s wells and therefore looks rather dubious. Top of the Franciscan was picked up at 4,100 feet and it is the present intention to make a test of the formation above this before pulling out. General Petroleum Co. in the Oxnard district of Ventura County abandoned No. 2 McGrath as a duster at 9,384 feet. This is the second dry hole to be drilled by this company in the vicinity of Oxnard.

Vaca Oil Co. landed and cemented an 8⅝-inch string of casing in its No. 1 California Lands which was bottomed at 2,820 feet. This wildcat found about 50 feet of tar sand above the shutoff point and it is the present intention to make a test of this zone before pulling out. This zone was passed up during the course of work. The bottom of the hole is in Diabase agglomerate.

Brazeau Test Planned

RED DEER, Alberta, Sept. 14.—West of Red Deer, a Calgary syndicate has secured an exploration permit covering 5,960 acres centering in Township 38-12w5, between Rocky Mountain House and Brazeau station. Drilling will likely be started this year. The only previous drilling in the general area was by Alberta Associated Oils, Ltd., about 20 years ago, when a test in LSD 3, section 34-39-10w5, was carried to less than 1,000 feet.

Waterways Oil, Ltd., headed by John Gainer of Edmonton, has sent a drilling crew in charge of James Heslop to resume work on its unfinished No. 1 test in the Clearwater section of northern Alberta, 45 miles east of McMurray. The test has been standing for several years at 500 feet, after two shows of crude.

Australian Oil Subsidy

The Australian cabinet has decided to speed oil searches because of the advice of the defense council that everything possible be done to make Australia independent of foreign supplies. Of the £250,000 subsidy for oil searches £50,000 is reserved for companies and individuals engaged in geological surveys on the basis of £1 for £2 spent by the searchers. The rest is reserved for approved companies engaged in drilling.

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The W. H. Harrison Drilling Co. Inc., which has had several strings of tools running throughout Texas and Louisiana, is moving in three rigs to the newly discovered Magnet field in southern Wharton County, where it will drill two wells for the Texas Crusader Oil-Cockburn Oil Corp. and one for W. W. Van Allen. Two rigs are active in the Corpus Christi area for Walker & Harrison and another is located in the old Sugerland field for Rogers and Harrison.

Edwards Drilling Co. has abandoned its No. 1 Rod at the Pickett Ridge field in Wharton County and is moving the rig to the Sour Lake field. One string of tools is located on a wildcat prospect in Hidalgo County for the Pantano Oil Co. and another at the Dickinson field for the Kenben Oil Co.

Ben (Bud) Coyle has marked up another discovery in Coastal Louisiana by completion of Mike Hogg and others No. 1 Laws Realty Co. located on the Charenton Prospect, which has been completed for an initial production of 500 bbls. a day from sand bottomed at a total depth of 7,210 feet. The new discovery is about 3 miles from the Jeanerette field where Mr. Coyle has three rigs running for the Herton Oil Co.

Glenn H. McCarthy has abandoned his No. 2 Kilgore at the Cotton Lake field in Chambers County and has moved the rig over for No. 3 Kilgore. In the Amelia field his No. 2-A Longe is drilling below 3,900 feet. In the Anahuac field he has two active rigs for the Humble Oil & Refining Co.

Nichlos Drilling Co. has cemented 7-inch casing, preparatory to testing No. 1 Garland at the Port Barre field for the Pan American Production, is moving a rig in for No. 2 P. W. Miller in the Tepetate field for Continental Oil Co., and is preparing to complete the company's No. 6-A Homeseekers Development Co. bottomed in sand at 8,320 feet.

Rutherford Drilling Co. is drilling plug on No. 9-B Cobb bottomed in sand at 7,723 feet, is preparing to complete a second well in the deep sand at 8,289 feet and is drilling below 7,420 feet on No. 10-B Cobb. The three wells, in the Van Vleck field in Matagoda County, are being drilled for Skelly Oil Co.

Rowan Drilling Co. is drilling below 6,300 feet on No. 1 Carpenter at the Fairbanks field in Harris County for Amerada-Stanolind Oil & Gas Co. It has two wells running at the Sinton field for the Centennial Oil Co; has cemented a protection string of 7-inch casing at 4,000 feet on Tide Water Oil Co. No. 1 Manhattan Fruit Co. in Plaquemines Parish; is rigging up on the same company's wildcat test in Refugio County, located near the town of Rivoli; has one rig waiting on orders at the Pearsall field in Frio County for Amerada Petroleum Corp.; and has one rig running at the Cayuga field for Stanolind Oil & Gas Co. One rig is on location for the Amerada Petroleum Corp. in Lea County, New Mexico, and three rigs are waiting location in the West Texas district.

Eddie Steen, who drilled the discovery well of the Port Lavaca field in Calhoun County and formerly was associated with the Halliburton Oil Producing Co., has entered the contracting business and has opened offices in the Second National Bank Building in Houston. He has one rig running in the Rodessa field for Superior Oil Producing Co.

Smith & McDannald are preparing to deepen Pan American Production Co. No. 1 Craig in the Dickinson field in Galveston County and have seven rotaries located as follows: One at Hastings, for Stanolind Oil & Gas Co.; one at Louise, for Pure Oil Co.; one at Long Lake, for Tide Water Oil Co.; one in Orange County, for Tide Water Oil Co., and three in the South Houston field, for themselves and Stanolind Oil & Gas Co.

The barbecue pictured in these columns last week was given by the Oil Center Tool Co. of Houston, Tex., in celebration of the opening of its new plant.

M. B. Fletcher's day tour, taken on the derrick floor of Texas Crusader-Cockburn Oil Corp. No. 1 H. C. Cockburn, the discovery well of a new field in Wharton County. Standing, left to right: George Tribble, W. Hyman, E. Finley, D. J. Maxwell, M. B. Fletcher (contractor), and Morey Vorgdrader, representative J. H. McEvoy Co.

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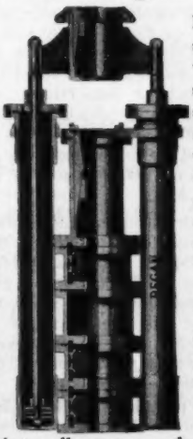


Embodies a snubbing device which is self-contained and wholly operated by the well pressure. Casing sizes are also used in conjunction with the Miller method of drilling through sour gas formations. Permits running casing and tubing against pressure, making well surveys under pressure and running graduated strings under pressure.

Ask for details.

Regan
Gorge Engineering Co.
San Pedro California

New York Office: 17 Battery Place, Geo. R. Woods, Mgr. *Kansas and Oklahoma Representatives:* Mid-Co Tool & Supply Co., 1008-12 S. E. 29th Street, Oklahoma City, Okla. *Mid-Continent Representatives:* Bettis Sales Co., 516 Merchants & Mfgrs. Bldg., Houston, Texas.

Oklahoma Operations

By DAL DALRYMPLE

CRESCENT POOL WELL FLOWS 8,085 BBLS. IN THREE HOURS

The largest potential production rating ever given a well in Oklahoma was earned in the past week by Carter Oil Co. and Gulf Oil Corp. No. 3 Walker, NW NE NE section 33-17-4w, Crescent pool, Logan County. It flowed 2,611 bbls. the first hour and 8,085 bbls. in the next three hours. In accordance with custom the last three hours' production was multiplied by eight giving the well a rating of 64,680 bbls. per day. The well produces from second Wilcox sand at 6,182-6,291 feet, total depth.

The Oklahoma City pool passed the 344,000,000-bbl. mark in total production on September 7, making it the largest individual pool in the state in productivity. The Cushing pool, which had been the leader for many years, had produced 327,400,000 bbls. up to that date, and Healdton 183,000,000 bbls., Burbank 200,600,000 bbls., Tonkawa 116,000,000 bbls. The Seminole field, which is made up of 12 pools close together, far exceeds Oklahoma City in production, but of its three leading sectors, Seminole City had produced 116,731,000 bbls.; Earlsboro (including South and East Earlsboro and the original Earlsboro pool), 173,950,000 bbls. The St. Louis-Pearson area produced 103,169,000 bbls. These are all given in round numbers and subject to minor correction, but they give the reader an idea of what the leading producing pools have done up to recent date. Oklahoma City is still next to the largest producing pool in the United States, being exceeded only by East Texas, and is destined to produce many millions of barrels of oil before it ends its usefulness.

Largest Capitol Tract Well

Sunray Oil Co. and Phillips Petroleum Co. No. 8 State, near Northeast Twenty-First Street and Phillips Avenue in Oklahoma City, came in Friday with a three-hour flow of 1,930 bbls. and with gas at the rate of 19,000,000 feet per day. The test had to be concluded at the end of three hours as the gas was cutting connections. It is rated at 15,294 bbls. potentially and is the largest producer on the capitol tract. Turman Oil Co. No. 1 Francis at Madison and Stiles Avenues was good for 6,100 bbls. per day and 8,000,000 feet of gas at a total depth of 6,508 feet.

A late near completion in the Edmond pool was Pure Oil Co. No. 10 Malm, NE SE SW section 30-14-3w, which flowed 729 bbls. the first hour and gas at the rate of 15,000,000 feet per day. First Wilcox sand was topped at 6,500 feet. Another near completion was Ohio Oil Co. No. 12 Dahl, NE SW SE section 31-14-3w, which flowed 525 bbls. of oil in 12 hours at a total depth of 6,625 feet and gas at the rate of 14,500,000 feet.

The Moore pool in Cleveland County appears to have been defined on the southeast trend by Denver Producing & Refining Co. No. 1 Keller, NW NW NE section 34-10-2w, a Schlumberger test having shown water at 7,394 feet.

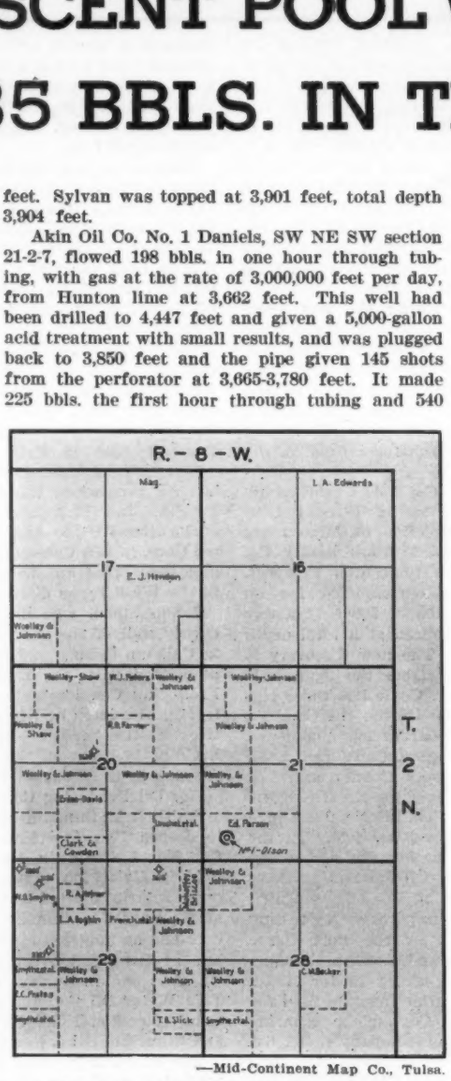
Two wells were completed in the South Burbank pool, Osage County, with a combined natural production of 4,961 bbls.

Six wells were completed in the Fitts pool in Pontotoc County and a number of locations on four farms were abandoned. The completions follow:

E. H. Moore and others No. 1 Norris, NW NE NE section 35-2-6, deepened from 4,400 feet to second Bromide sand at 4,403-21 feet, pumped 53 bbls. of oil and 10 bbls. of water in six hours.

Mid-Continent Petroleum Corp. No. 3 McKoy, a twin, SW SW SW section 20-2-7, flowed 98 bbls. in six hours through tubing with gas at the rate of 1,600,000 feet, from Hunton lime topped at 3,631 feet. Sylvan was topped at 3,901 feet, total depth 3,904 feet.

Akin Oil Co. No. 1 Daniels, SW NE SW section 21-2-7, flowed 198 bbls. in one hour through tubing, with gas at the rate of 3,000,000 feet per day, from Hunton lime at 3,662 feet. This well had been drilled to 4,447 feet and given a 5,000-gallon acid treatment with small results, and was plugged back to 3,850 feet and the pipe given 145 shots from the perforator at 3,665-3,780 feet. It made 225 bbls. the first hour through tubing and 540 bbls. in 1 hour and 15 minutes through casing late in August.



—Mid-Continent Map Co., Tulsa.

Rig is being built for Ed Parsons No. 1 Olson, C SW SW section 21-2n-8w, Stephens County, wildcat test to be carried to 7,000 feet. Olson Drilling Co., Tulsa, has the contract

Blackstock and others No. 2-A Moody, SW cor. section 23-2-7, which flowed 2,196 bbls. in six hours through casing, later flowed 198 bbls. in one hour through tubing with gas at the rate of 1,000,000 feet per day, producing from Hunton lime topped at 3,470-3,815, total depth 3,845 feet.

Simpson, Fell and Westheimer No. 2 Westheimer, SW NW NW section 26-2-7, made a potential of 3,476 bbls. of oil and 2,300,000 feet of gas from Bromide sands at 4,187 feet and 4,260 feet.

Carter Oil Co. and others No. 1 Z. K. McCoy, NW cor. section 33-2-7, is an upper McLish producer. It made a potential production of 2,824 bbls. of oil and 1,500,000 feet of gas. First Bromide was at 3,980 feet; second at 4,080 feet, McLish at 4,120 feet, Dense at 4,335 feet, total depth 4,340 feet.

The abandoned locations, all by Moore and others, include No. 6 Mack, SE SW SE section 28-2-7; No. 8 Mack, SE SE SE section 28-2-7; No. 10 Mack, SW SE SE section 28-2-7; No. 5 Patrick, NW SW NE section 31-2-7; No. 6 Patrick, NE SE NW section 31-2-7; No. 4 Benton, NE SW NW section 32-2-7; No. 5 Benton, NW SE NW section 32-2-7; No. 7 Benton, SE NE NW section 32-2-7, and No. 3 Mobley, SW NW NE section 32-2-7.

New work reported in the past week included Magnolia Petroleum Co. No. 6 Hardin, 990 feet from north and 430 feet from east lines of NW quarter section 30-2n-7, building rig for Hunton lime test; Sinclair Prairie Oil Co. No. 7 Woolley A, NE SW SW section 22-2-7, cellar dug; Stahl Petroleum Co. No. 4-B Dennis, 300 feet from south and 950 feet from west lines of NE quarter section 21-2n-7, drilling at 164 feet, in Hunton lime test.

Wells in the sand but not completed in the Fitts pool include Bishop Oil Co. No. 5 Simpson, NW NW NW section 28-2-7, flowed 205 bbls. in two hours after a 10,000-gallon acid treatment, total depth 4,290 feet; Blackstock No. 3-A Hardin, SW SE NW section 30-2-7, flowed 702 bbls., 354 bbls. and 288 bbls. per hour, respectively, in a three-hour test through casing, and 164 bbls. in three hours through tubing. It has been acidized with 10,000 gallons in Hunton lime, total depth of 3,646 feet. Magnolia Petroleum Co. No. 5 D. Harden, SE NW NE section 30-2-7, flowed 393 bbls. in one hour through casing at a total depth of 3,800 feet. It had been acidized with 5,000 gallons.

Estimated Daily Production

Estimated daily average production in Kansas for the week ending September 12, and for the preceding week, is as follows:

	Barrels	
	Sept. 12	Sept. 5
Allen	8,900	9,500
Burbank	7,800	7,800
South Burbank	14,500	14,750
Balance Osage	22,400	22,500
Blackwell district	5,175	5,300
Bristow-Slick	8,525	8,425
Chandler	4,225	4,200
Crescent	7,325	6,775
Cromwell	3,675	3,650
Cushing-Shamrock	11,400	11,350
Duncan district	4,025	3,960
Edmond	11,325	14,475
Fish	7,375	7,625
Fitts	62,375	56,425
Gray	1,600	1,400
Graham	4,600	4,025
Healdton	9,400	9,375
Hewitt	4,475	4,450
Holdenville	1,025	1,025
Keokuk	6,300	4,300
Konawa	1,750	1,825
Lucien	13,225	12,250
Marshall-Lovell	875	850
Moore	1,525	1,350
Oklahoma City	136,250	142,225
Olympic	9,175	7,650
Papoose	975	1,000
Polo	2,800	2,850
Sasakwa and townsite	3,300	2,650
Sholem-Alechem	3,425	3,400
Seminole field:		
Bowlegs	11,925	10,675
Carr City	6,100	6,725
Earlsboro	7,450	6,900
South Earlsboro	825	975
East Earlsboro	10,150	10,400
Little River	12,900	12,275
East Little River	1,350	1,250
Maud	950	975
Mission	2,500	2,275
Seminole	9,725	9,550
East Seminole	4,225	3,850
Searight	5,275	3,875
Total Seminole	73,375	69,575
St. Louis-Pearson	24,000	23,675
Tatums	3,150	3,125
Tonkawa-Garber-Thomas	5,550	5,550
Wewoka	3,975	3,975
Yale-Jennings	4,175	4,200
Other pools	71,500	71,300
Total Oklahoma	565,450	558,750

Osage County

Two good sized wells were completed in the South Burbank pool in Osage County. Skelly Oil Co. No. 7 Smith, SE NW NW section 26-26-6, started at 2,420 bbls. a day, naturally, from Bartles-

ville sand at 2,840-2,924 feet, total depth 2,927 feet. Lewis Production Co. No. 5 Callahan, 980 feet south and 980 feet west of C section 23-26-6, flowed 2,885 bbls., naturally, in 24 hours and then 2,541 bbls. in 24 hours from Bartlesville sand at 2,870-2,937 feet, total depth, first oil at 2,875 feet and first flow at 2,885 feet.

Other completions in the county were as follows: F. A. Gillespie & Sons Co. No. 1, SE cor. NE section 5-20-12, 7 bbls. at 1,425-52 feet; Midco Oil Corp. No. 25, SE cor. NE SE section 18-22-10, 50 bbls. of oil and 125 bbls. of water from Burgess sand at 1,854-1,900 feet, total depth; Bay Oil Co. and others No. 2, SE cor. SW SE NW section 25-22-7, 40 lbs. of 39 gravity oil from Siliceous lime at 2,943-67 feet, shot with 25 quarts; Bay Oil Corp. No. 1, 967 feet south and 500 feet east of C section 4-24-8, dry and abandoned at 2,877 feet, Arbuckle lime topped at 2,831 feet. Peters Petroleum Corp. and Sinclair Prairie Oil Co. No. 12 Sawyer, 1,220 feet north and 300 feet east of C section 24-24-7, 95 bbls. from Hominy-Wilcox sand at 2,716-38 feet; Tide Water Oil Co. No. 7 Graves, SW cor. NE section 9-24-7, 315 bbls. from Bartlesville sand at 2,599-2,618 feet, shot with 60 quarts.

New work started included Wood Oil Co. No. 1-A Mann, NW SW SW section 23-20-7, fishing for 8-inch casing, total depth 2,671 feet, in shale; Elm Oil Co. No. 6, 1,320 feet from north and 1,120 feet from east lines of NW quarter section 17-20-12, location; Peters Petroleum Corp. and Finance Oil Co. No. 13, 300 feet north and 1,005 feet west of SE cor. section 12-23-8, location. Continental Oil Co. and Gulf Oil Corp. No. 4, SW NW SW section 22-24-7, building rig.

Oklahoma County

In the Britton field, Oklahoma County, Sinclair Prairie Oil Co. and Slick-Urschel, Inc., No. 1 Buxton, NW cor. section 16-13-3w, was dry and abandoned at 6,930 feet.

In the Edmond pool, Continental Oil Co. No. 10 Young, SW SE NW section 31-14-3w, flowed 2,267.89 bbls. in four hours on its completion test.

Slick-Urschel, Inc., was digging cellar for No. 5 Suneram, SE NW NE section 6-13-3w, Britton area. Ohio Oil Co. made a location for No. 1 McMillan, NE NW SW section 31-14-3w, Edmond pool, and was building rig for No. 3 Dahl, NW NE SW section 31-14-3w.

Pottawatomie County

Hilton Phillips No. 2 Cherry, SW NE SW section 21-7-4, Pottawatomie County, had Simpson at 4,113 feet, total depth 4,154 feet, swabbed 150 bbls. in 24 hours and was completed.

Bishop Oil Co. completed a 35-bbl. well in No. 1 Zoller, NE NW NE section 6-6-5, after acidizing Simpson Dolomite bottomed at 4,162 feet. It had been plugged back from 4,197 feet. Same operator's No. 1 Zoller B, NW NE NE section 6-6-5, pumped 37 bbls. a day after plugging back from Wilcox sand to Dolomite bottomed at 4,175 feet, and acidizing.

Oklahoma Oil Corp. was drilling at 4,249 feet, deepening No. 4 Bruno, SE SE NE section 25-7-4, old total depth 4,133 feet, and Gulf Oil Corp. and Magnolia Petroleum Co. and rig up for No. 2 Vinson, NW SW NE section 13-7-4.

Seminole County

Completions in Seminole County were as follows:

Tom Phillips and others No. 1 Jones, 990 feet from north and 785 feet from west lines of SW quarter section 26-11-6, pumped 147 bbls. of oil and 150 bbls. of water from Hunton lime at 4,127-50 feet.

Gulf Oil Corp. No. 2 Scott Fife, C E half NE NW section 11-10-6, old well deepened from 4,171 feet to 4,190 feet, pumped and flowed 425 bbls. of oil and 82 bbls. of water in 24 hours. It has been acidized.

Sinclair Prairie Oil Co. No. 7 Foster, NE NW NW section 33-8-8, deepened from 3,163 feet to Misener sand topped at 3,885 feet and Hunton lime topped at 3,895 feet, total depth 3,994 feet, was acidized with 1,000 gallons and produced 213 bbls. the first 17 hours and then 180 bbls. in 24 hours from Hunton and Misener sands.

W. B. Pine No. 5 Cheparny, SW SE SW section 12-5-7, had Misener sand at 3,995 feet and Hunton

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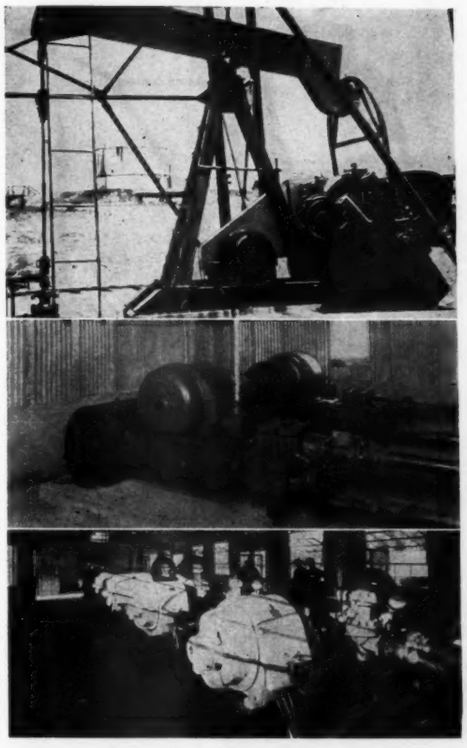

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lime at 4,008 feet, total depth 4,266 feet, in Viola lime, plugged back to 4,015 feet and shot at 3,993-4,015 feet, swabbed and flowed 416 bbls. in 24 hours and later 1,064 bbls. in 48 hours from Misener and Hunton.

Sinclair Prairie Oil Co. No. 4 Harjo, SE NW SE section 12-5-7, Wilcox sand at 4,273-83 feet, total depth, shot with 15 quarts, swabbed 276 bbls. of oil in 48 hours. Same company's No. 2-A Mathis, 270 feet from south and 330 feet from east lines of NE quarter section 12-5-7, Wilcox pay at 4,147-64 feet, shot with 30 quarts, swabbed 340 bbls. in 48 hours.

Barnsdall Oil Co. No. 2-A Lustey, near C NW NW NE section 13-5-7, was dry and abandoned at 4,348 feet. No Wilcox sand was reported.

Sinclair Prairie Oil Co. was building rig for No. 2 Rogers, 270 feet from north and 330 feet from east lines of SE quarter section 12-5-7; W. A. Delaney No. 1-A Reed, SE SW SW section 12-5-7, is a location; Deep Rock Oil Co. No. 6 Hagler, SE NE NE section 19-9-7, location; McAdams & Burns No. 1-A Jeffries, NW SW SW section 32-8-7, location. Amerada Petroleum Corp. and others No. 1 Yahola, NE NW NW section 36-10-7, cellar and pits; Carter Oil Co. No. 2 Hully, C E half SE SE section 15-10-6, rig.

Okfuskee and Hughes Counties

Burke-Greis Oil Co. No. 1-A Dunson, SE NW NW section 3-9-8, in the Olympic area, Hughes County, was dry and abandoned at 2,206 feet. It penetrated Calvin sand at 1,675 feet and Senora sand at 1,969 feet, both barren.

Sinclair Prairie Oil Co. No. 15 Oliphant, SW SE SE section 1-9-8, Olympic pool, was completed in Senora sand at 1,657-1,707 feet, total depth. It was shot with 60 quarts and flowed 144 bbls. in 24 hours.

Sinclair Prairie Oil Co. No. 4 Carolina, SE NW SW section 31-10-9, Okfuskee County, had Senora sand at 1,780-91 feet, shot it with 20 quarts, and it flowed and swabbed 125 bbls. initially; completed.

Ark Royalty Co. No. 1 Palmer, NE NW NE section 19-10-9, had Senora sand at 1,774-1,815 feet, total depth, was shot with 60 quarts and on its completion test pumped 106 bbls. in 24 hours.

Sinclair Prairie Oil Co. No. 16 Oliphant, SW SW SW section 1-9-8, Hughes County, is a rig; Chapman & McFarland No. 2 Yahola, SE SE SW section 30-10-9, Okfuskee County, set 10-inch pipe at 42 feet, and J. A. Chapman No. 2 Peter King B, SE SW SW section 30-10-9, was spudded.

Greater Seminole Near Completion

Conley Drilling Co. No. 3 Vinson, SE NE NE section 13-7-4, St. Louis pool, Pottawatomie County, pumped 1,266 bbls. of oil in 24 hours from Wilcox sand at 4,055-64 feet, total depth. It also produced 240 bbls. of water in the same period. Hilton Phillips No. 3 Bettis, SW SE SW section 21-7-4, pumped 315 bbls. in 24 hours at a total depth of 4,105 feet.

Pure Oil Co. No. 2 Harjo, NW SW NE section 11-7-6, Seminole County, swabbed 110 bbls. in six hours from second Wilcox sand at 4,272-92 feet. It was an old well drilled deeper.

Amerada, Stanolind and Sinclair companies No. 1 McGertt, NW NW SE section 31-9-9, Hughes County, acidized with 1,000 gallons in Hunton lime at 4,063-82 feet, swabbed and flowed 143 bbls. net oil in 24 hours.

Amerada Petroleum Corp. No. 1 Pyle, NW NW SE section 3-10-5, Seminole County, had Hunton lime at 4,437 feet and in four 24-hour tests flowed, respectively, 700 bbls., 173 bbls., 144 bbls. and 126 bbls., the first 24 hours on 1-inch choke and the three other days on 11/64-inch choke. It was not completed.

J. A. Chapman No. 1 Peter King B, SW SW SW section 30-10-9, Okfuskee County, had 6,000,000 feet of gas and a spray of oil at 1,752-72 feet. It was shot with 60 quarts at 1,735-72 feet.

Champlin Refining Co. No. 1-A Thompson, SW SW NW section 7-13-8, Okfuskee, was shut down at 4,100 feet with 700 feet of water in the hole from second Wilcox sand at 4,090 feet.

Garfield County

Earl McBride and others No. 1 Gage Estate, SE SE NW section 27-22-3w, a wildcat, which was spudded late in 1935, was reported abandoned at 1,380 feet after a long shutdown.

Noble County

In the Billings pool in Noble County, Phillips Petroleum Co. and Shell Petroleum Corp. No. 2 McCaughtrey, NE NW NE section 21-23-2w, flowed 665 bbls. in six hours from Wilcox sand at 4,251-69 feet, total depth, together with 3,750,000 feet of gas. It was given a potential of 2,473.27 bbls. per day. The oil is 42.8 degrees in gravity and Shell Pipe Line Corp. is running it.

Kiowa County

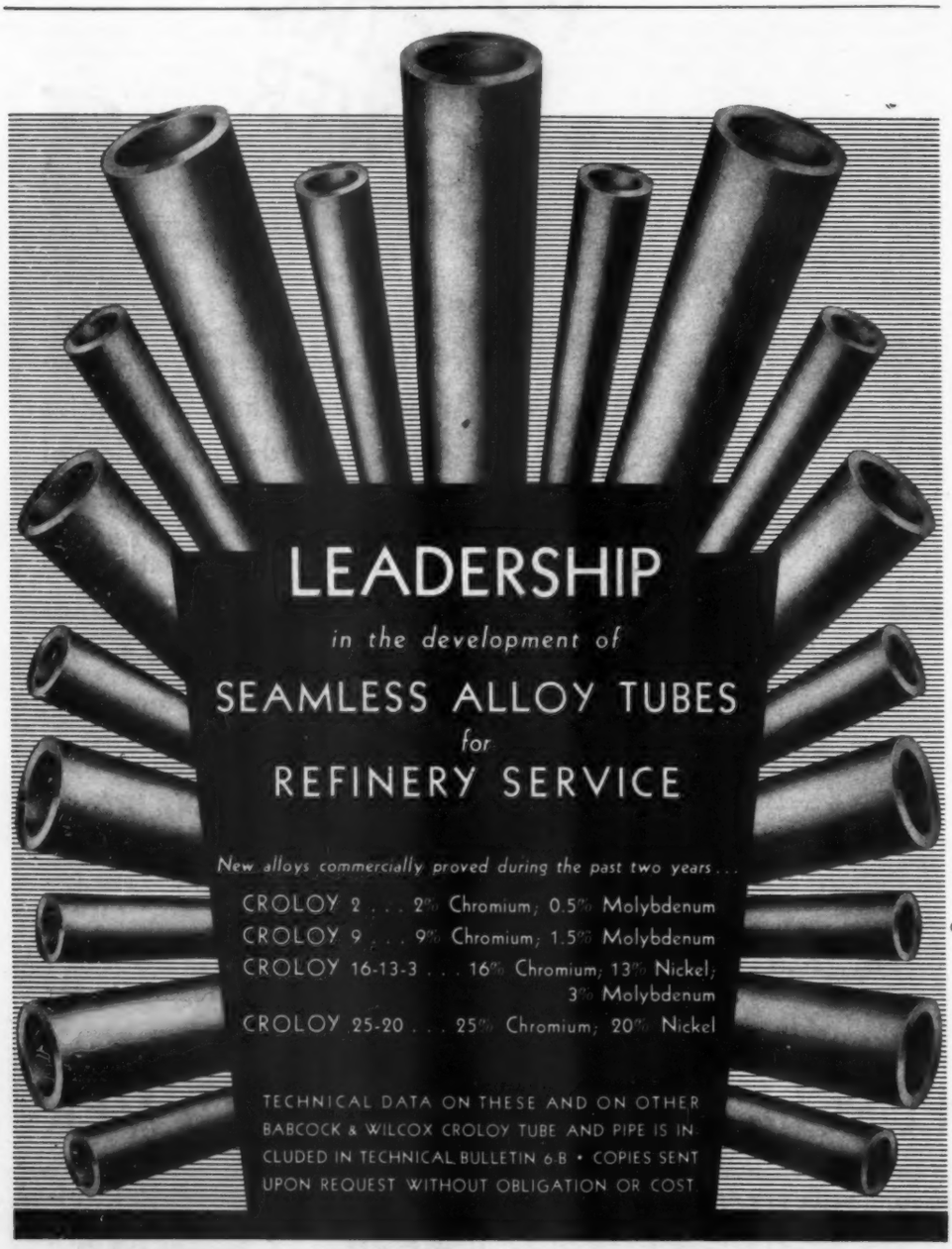
Pendleton & Vaughn have machine rigged up for a wildcat test in Kiowa County, No. 3 Smart, 1,170 feet south and 1,170 feet east of C section 12-6n-17w.

Southern Fields

Completions in southern counties were as follows: Farlyn Oil Co. No. 39 Seay, NE SW SE section 3-7s-5w, Jefferson County, 15 bbls. at 1,199-1,220 feet; Carter Oil Co. No. 3 Horton, SW SW SE section 21-4s-2w, Carter County, deepened from 2,302 feet to 2,443 feet, dry and abandoned. Shell Petroleum Corp. No. 45 McClure, SW NW SE section 5-4s-3w, Carter County, 22-bbl. pumper at 475-95 feet; Shell Petroleum Corp. No. 15 Hapgood, SW SW SW section 3-4s-3w, dry and abandoned at 1,090 feet. Ideal Oil Co. No. 11 Scroggins, SE SE SE section 32-3s-3w, Carter County, 15-bbl. well from sands at 960 to 1,136 feet; Raisen Brothers No. 3 Bohanon, SE cor. SW SE SW section 10-3s-5w, Stephens County, 18-bbl. well at 1,433-50 feet; C. P. Williams No. 2 Brady, SW cor. SE NE SW section 19-1s-2w, Carter County, 40-bbl. well from sand series at 1,389 to 1,451 feet; Gulf Oil Corp. No. 1 Wearmouth, SE NW SE section 31-1s-18w, a Tillman County wildcat, dry and abandoned at 5,127 feet.

Mid-Continent Petroleum Corp. and others made location for No. 1 Reid, C SW SW section

(Continued on Page 81)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Eastern Fields

(Continued from Page 60)

drilled No. 50 on the Arabella D. Huntington lease in Cabin Creek district to 2,971 feet and dry.

In Lincoln County, United Fuel Gas Co. completed No. 4,610 on the Mohler Lumber Co. tract in Washington district at 4,415 feet with gas at 2,200-15 feet gauging 80,000 feet; Brown shale and shells 2,850-4,410 feet with gas at 2,990-4,339 feet gauging 621,000 feet.

In Marshall County, Carnegie Natural Gas Co. completed No. 4 on the D. W. McGlumphy farm in Cameron district in the Salt sand at a total depth of 1,562 feet with slightly over 1,000,000 feet of gas.

In Pleasants County, W. P. McCullough drilled on the Robert Wilson farm in Lafayette district through the Maxon sand to 1,635 feet and dry.

In Ritchie County, J. F. Deem completed a test on the Lemon and McGregor lease in Murphy district to 2,110 feet and filled it back to 1,885 feet, the Keener sand, where it gauged 318,000 feet.

In Upshur County, Union Gas Corp. completed a deep test on the J. W. Gould farm in Buckhannan district at 4,289 feet. There was no gas in the Benson sand and it was filled back to 2,330 feet for a shot. There was some gas at 2,290-2,306 feet in a stray unnamed sand.

In Wetzel County, Manufacturers Light & Heat Co. completed a test on the Sarah A. Critchfield farm in Church district in the Fifth sand at 3,105 feet gauging 108,000 feet.

Deep Tests

There were four new locations made for deep tests in Kanawha County. In Elk district, Columbian Carbon Co. has a location on the Susan I. Given farm on a fork of Lick Branch. Elevation is 988 feet.

In Elk district, United Fuel Gas Co. has made a location on the G. C. Cavender farm on Five Mile Fork of Coopers Creek, and has a rig building on the H. A. Walker and others farm on Wolf Penn Branch. It has also made locations for three wells on the W. C. McKee farm on Bens Run.

The most interesting test in Kanawha County is soon to reach the Oriskany sand. United Carbon Co. is down 5,682 feet on the J. A. and M. F. Osborne farm with casing set in the bottom of the lime. It should reach the sand this week.

In Malden district, United Fuel Gas Co. should complete the first of its deep tests. On the Georges Creek Land & Mining Co. (Shrewsbury tract) its No. 4,643 is shut down setting casing in the lime and its No. 4,657 is drilling at 4,590 feet. Here United Carbon Co. has reached 4,860 feet on the J. Q. Dickinson farm. Glen Oil & Gas Co. has a fishing job at 4,945 feet on top of the Oriskany sand on the Virginia Joint Stock Land Bank.

In Poca district, Kanawha County, United Carbon Co. is down 4,050 feet on the Ahaz Spencer farm; 2,125 feet on the S. H. Milam farm; 1,812 feet on the W. P. Moss farm; and, the most interesting, 1,675 feet on the G. W. Facemyer or the most westerly test in the county. William O. Zeibold has reached 3,650 feet on the Griffith and Dixon lease and 675 feet on the Avilee Baldwin farm.

New Work

In Cabell County, W. C. Kingery has a location on the M. P. Shawkey farm on Right Fork of Fourpole Creek in Guyandotte district. In McComas district, Sue Gas Co. has a location on the Mrs. A. J. Coffman farm on Tyler Creek.

In Gilmer County, W. H. Miller is spudding on the Lulu and C. J. Simon farm in Troy district. Massey and Jarvis are drilling on the I. H. Keister farm. In DeKalb district, E. L. Bush has a rig on the J. W. Cunningham farm.

In Harrison County, Lumberport Shinnston Gas Co. has a rig on the D. R. Rogers farm in Eagle district. In Doddridge County, Robert Broadwaters and others have a rig on the Ranzy B. Ash farm in McClelland district.

In Marion County, Carnegie Natural Gas Co. has made a location on the P. M. Hibb farm in Mannington district. In Paw Paw district, Hope Construction & Refining Co. has a rig on the Jacob R. Rice farm.

In Marshall County, Burley Wright and others have a rig on the Elmer Blake Estate in Webster district. In Union district, Matthew Hazlett and others have a location on the Catherine V. Hazlett farm.

Monogalia County is now active. In Cass district, Convex Glass Co. is rigging on the H. D. Barrackman farm. Carnegie Natural Gas Co. is drilling on the L. D. Boyles farm, In Clay district, Equitable Gas Co. is drilling at 2,889 feet on the J. J. Moore farm. In Battelle district, Hope Construction & Refining Co. is down 975 feet on the C. L. Eakin farm.

In Pleasants County, C. E. Love and others have started drilling on the Johnathan DeLong farm in Jefferson district. T. P. Feeney and others have a test started on the C. B. Maryin farm, same district.

In Roane County, South Penn Oil Co. has a rig for No. 3 on the S. W. Allen farm in Reedy district. In Harper district, L. C. Young and others are drilling on the John and Rex Kee 41-acre farm.

In Ritchie County, Moats and Richards Oil & Gas Co. has a second test started on the Georietta Ross farm in Grant district. In Murphy district, W. H. Bickel has a rig up for No. 4 on the S. E. Smith farm. Patterson and Pope have a rig for No. 4 on the Harry W. Patterson farm. South Penn Oil Co. is rigging up No. 17 on the Haught Lambert farm.

Broadmoor Receiver Named

TYLER, Tex., Sept. 15.—Federal Judge Randolph Bryant has appointed Romer Bullington of Wichita Falls receiver for the Broadmoor Sales Co., Inc., owner of 14,500 bbls. of oil in East Texas pits and tanks. A request for the receivership in order to pay more than $4,000 in federal taxes, was made by G. H. Burnhan and J. D. Wrather after a suit had been filed against them and the company.

Dr. J. A. Shaw, director of minerals division, Louisiana Department of Conservation, attended the meeting of the Rodessa Operators Committee at Shreveport, La., last week.

"I'll Say this record is the driller's BEST FRIEND!"
There's no buck-passing or arguing with it. The Boss says hold 'er here or hold 'er there, and you do; that's that, and the recorder proves it.
Always look for a Recorder on the Weight Indicator.
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LONG BEACH CALIFORNIA
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Michigan Field Report

By
PAUL A. ELLIOTT

COMPLETIONS ARE DOUBLED ADDING 1,000 BBLS. INITIAL

MUSKEGON, Mich., Sept. 14.—More than doubling the previous week's completions, Michigan oil and gas operators last week added more than 1,000 bbls. of new initial oil production in seven wells, brought in four gassers with an aggregate open flow capacity of 60,000,000 feet and recorded six dry holes, a total of 17 compared with 8.

Several interesting new wildcat developments also were recorded though none had proved of major importance when the week closed.

Monthly report of oil production for August, first compiled by the Oil and Gas Association of Michigan, succeeding the former Michigan Oil Producers' Committee, revealed a total output of 940,774 bbls., or 30,348 bbls. daily.

Production by fields showing the number of wells as of September 1 and their daily average output for the preceding month was announced as follows:

Pool—	Wells	Runs
Porter	344	12,146
Yost-Jasper	54	4,787
Greendale-Chippewa	274	2,338
Geneva-Midland	2	57
Vernon-Leaton-Denver	94	2,211
Crystal-Montcalm	137	4,817
Home-Edmore	9	190
Vickeryville-Montcalm	1	26
Beaverton	17	785
Buckeye-Gladwin	1	53
Ogemaw County	136	2,443
Saginaw	69	72
Birch Run	24	152
Dundee-Monroe	1	25
Muskegon	106	246
Total	1,270	30,348

Wildcat Developments

Of outstanding interest among wildcat developments was the discovery of a possible new extension of the Beaverton Township, Gladwin County, field in the Goll, Graves & Mechling, Inc., No. 1 Crigano, SE SE NE section 36-17-2w, Beaverton Township, about 5 miles south of the proved field.

Drilling in an area which has claimed special attention since the same operators brought in the discovery well in a newly developing field in Buckeye Township, Gladwin County, the Crigano test struck oil about 60 feet in the Dundee limestone, indicating either a new field or a long extension of the existing pool. It was believed the former.

Tests for commercial possibilities had not been completed as the week closed but were expected to reveal sufficient production to warrant further drilling in this sector. The Crigano is about three-fourths of a mile west of a test drilled two years ago by the Sun Oil Co. on the Hines lease, C NW NE section 31-17-1w, Tobacco Township, which struck shows of oil and gas at two depths in the Dundee, one about 90 feet in and the other about 160 feet, before it was plugged and abandoned at 3,978 feet. It had been plugged back from a total depth of 3,998 feet.

Daily production of the Buckeye Township well, the No. 1 Oard, has dropped back to about 100 bbls. after a rise to 354 bbls. in 24 hours after its third acid treatment.

Arenac County

Also attracting new interest because of its oil possibilities was the T. F. Caldwell, Inc., No. 1 Mutch oil, NE SE SE section 17-19n-4e, which swabbed about 20 bbls. after acid treatment for a show in the Dundee limestone in Deep River Township, Arenac County, about 25 miles east and 6 miles north of the Buckeye well.

Dundee lime was encountered at about 2,770 feet and the oil show at 2,948 feet where drilling was suspended. It was shot with 60 quarts of nitro and treated with 2,000 gallons of acid.

Another Arenac County test, the Tamblyn and Martindale No. 1 Buffalo Land Co., SE NE NE section 7-19n-3e, in the adjoining Adams Township, also was nearing the Dundee, drilling more than 2,600 feet deep.

Two Deep Tests

Two deep tests, one in northeastern Michigan and the other in the central part of the lower peninsula, were nearing the Trenton limestone at depths of 5,000 feet or greater.

C. W. Teater's No. 1 Nevins, NW NW NE section 18-32n-6e, Long Rapids Township, Alpena County, was about 5,000 feet down in a hole started with 20-inch casing, while Michigan Oil Exploration Co. No. 1 Croff, NE SW NW section 35-7n-9w, Vergennes Township, Kent County, near Lowell, was about 5,350 feet deep.

Charles Van Keuren and Keith B. Montigel also topped the Trenton in their upper peninsula test, the No. 1 Hiawatha Sportsmen's Club, NE NE SW section 17-44n-9w, Garfield Township, Mackinac County.

Two wildcats neared the Dundee in Clare and Clinton Counties. The former was A. Hansen No. 1 Hansen, SE SE SE section 26-17n-5w, Surrey Township, Clare County, and the latter was H. E. Bell's No. 1 Arthur, NW SW NW section 29-6n-1w, Victor Township, Clinton County. Both were being watched as possible discovery tests of new central Michigan fields.

Completions

Largest new oil well of the week, and one of the largest Dundee producers ever completed in the Ogemaw County fields, was R. F. Vorhees, Inc., No. 1-A Donavan, NW SW NW section 19-22n-2e, West Branch Township, which made 400 bbls. in nine hours after acid treatment.

Dundee limestone was topped at 2,625 feet and the hole drilled to 2,782 feet before treatment. It was immediately placed on the pump.

Weber Oil Co. finally completed the No. 1 Gamber, NW NE SE section 35, same township, for 60 bbls. daily on the pump after similar acid treatment. McClanahan Oil Co. No. 4 Heintz, NE NW NE section 24-22n-1e. Ogemaw Township and County, also was rated good for about 40 bbls. a day after acid treatment in the Dundee lime.

Two other Ogemaw tests had been drilled into the oil pay sands of the Dundee and were testing and treating before completion. J. W. Leonard, Jr., Trustee, No. 4 Heintz, SW NW NE section 24. Ogemaw Township, drilled to 2,814 feet, was ready for acid, while Sun Oil Co. No. 4 State Department of Conservation, NE SW NE section 1-21n-2e. Horton Township, had oil and water in the hole testing at 2,630 feet, about 140 feet in the Dundee.

Isabella County

Following the unexpected success of J. V. Wicklund No. 1-B Durnin well, NW SW NW section 23-16n-4w, Vernon Township, Isabella County, which came in the week before with an initial flow of about 65 bbls. an hour, or 1,500 bbls. a day, another old Isabella County field contributed a producer last week.

Thompson Brothers, Inc., No. 2 Smith, NE NW NE section 3-14n-3w, Chippewa Township, Isabella County, in the original Mount Pleasant field, started flowing 20 bbls. an hour after acid treatment in the Dundee limestone at a total depth of 3,603 feet. It was rated good for at least 200 bbls. a day and perhaps more in the old Greendale-Chippewa field of 274 wells.

Glacial Oil & Gas Corp, also struck Dundee oil in its No. 1 Tressel, NW NW NW section 2, Chippewa Township, and was to be treated with acid at 3,608 feet deep.

T. F. Caldwell, Inc., however, decided to abandon the No. 11 Joslin, NE SW SW section 12, same township, which failed to develop commercial production on the discovery lease in the old field.

McClanahan Oil Co. also will plug and abandon the No. C-1 State, NW SW NW section 34-15n-3w, Denver Township, Isabella County, a failure in the old Leaton field of Isabella County.

The new Durnin well in the Vernon Township section of the Vernon-Leaton field continued to flow 25 to 30 bbls. an hour several days after it was brought in, declining about 50 per cent below the unexpectedly high flush production of the week before. It was still one of the larger wells in the state and one of the best ever completed in the Vernon field. Dundee was topped at 3,756 feet and pay at 3,763 feet.

Midland County

Pure Oil Co. completed two small Dundee producers in the Porter-Yost field, one in Porter and the other in Jasper Township. Pure No. 8-A Bond, C N half SW SW section 7-13n-1w, Porter Township, made about 75 bbls. in 24 hours, while same company's No. 2-B Bond, C N half NE SE section 12-13n-2w, Jasper Township, was good for about 50 bbls. a day. The former was drilled to 3,437 feet and the latter to 3,439 feet.

Despite a 48-bbl.-a-day flow from the Traverse the week before, Pure No. 10 Bond-Root, located C N half SW NW section 2, Jasper Township, last week continued drilling to the Dundee for more steady production.

Pure No. 4 Alspaugh, C S half NE NW section 2, Jasper Township, struck oil in the Dundee drilled to 3,437 feet and was treated to increase production before completion.

Midwest Petroleum, Inc., No. 1 Rosselit-McCormick, NE NE SW section 20-15n-2w, Geneva Township Dundee test, struck oil and filled up rapidly before an acid treatment expected to make it another commercial producer in the lower formation in this area where two Traverse wells opened a new field several months ago.

Two other Midland County tests in the old Greendale Township area, Red-Man Oil Co. No. 1-B Seeley and Bernard, section 9-14n-2w, and Hubbell Oil Producing Co. No. 2 Jacobs, same section, were nearing Dundee completion.

Byron A. Bartlett No. 1 Siebert, NW SW SE section 33-15n-2e, Larkin Township, Midland County, which failed to make commercial production in the Berea recently, resumed drilling to test the Dundee.

Crystal-Montcalm

Only one oil producer, C. & M. Securities No. 2 James Flint, NE NE SW section 35-11n-5w, Ferris Township, Montcalm County, was completed in the Crystal field last week, though three others were in the pay and treating with acid and two were cased and about to be drilled into the Dundee.

The producer made 120 bbls. in 24 hours though one location south of a failure of the previous week. Garfield Petroleum Corp. plugged back its No. 1 Reid, SW NE NW section 26, same township, to treat for commercial production. Daily Crude Oil Co. was drilling into the Dundee in its No. 3 Fulford, NE NW SW section 36, also

Ferris Township, and had reached a depth of more than 3,211 feet.

Jetter Development Co. struck about 250,000 feet of gas in the No. 1 Tissue, C SE NE section 6-10n-5w, Crystal Township, in a test 2 miles west of the proved oil field, and tubed the well.

Nirzel-Leland Development Corp. failed to strike Michigan Stray gas in the No. 1 Phillips, C NE SW section 1, same township, after topping the Stray sand at 983 feet. Operations were continued to test the Marshall formation topped at 1,007 feet.

Two other Crystal Township tests had oil in the hole and were completing: J. W. Leonard, Jr., Trustee, No. 6 West, SW SE SW section 2, at 3,184 feet, total depth, and Rowmor Corp. No. 1-B Strait, NE NW SW section 3, which flowed 85 bbls. in two hours but was drowned out with water. Max Pray No. 1 Strait, SW NW NW section 3, Crystal Township, also was ready to case and drill into the Dundee.

Gassers

Four new gas wells were encountered in three different central Michigan fields last week, including the Tri-Townships field of Montcalm and Mecosta County, the Gratiot County field and the Austin Township, Mecosta County, field.

Tri-Township Field

Largest of the new gassers was brought in by the Wolverine Natural Gas Corp., No. 1 on the Rufus Bellows lease, C NW SW section 10-12n-7w, Belvidere Township, Montcalm County. It gauged 47,306,000 feet daily, topping the Michigan Stray sands at 1,228 feet and drilling to 1,264 feet. Four others of eight tests listed in the township were nearing completion in the shallow gas sands.

Columbia Oil & Gas Co. brought in its No. 2 Albert Dutmer, C SW NW section 23-13n-8w, in the Hinton Township section of the same field for an open-flow capacity of 13,454,000 feet daily in the northwestern corner of the field. Only one other location for a gas test in Hinton was listed.

Gratiot County

W. E. Ross brought in his No. 1 Milton Chene, NE NE section 4-10n-4w, New Haven Township, Gratiot County, in the northeast corner of this field with an open flow of 2,020,000 feet daily from Michigan Stray gas sands encountered between 962 and 986 feet.

Herbert Snell No. 1 Clyde Smeade, SW SW SE section 20-11n-4w, Sumner Township, struck gas in the Marshall at 1,032 feet, but it was drowned out by water and drilling continued toward the Dundee for oil.

R. L. Stoddard No. 1 Soule, an unsuccessful Dundee oil test, was completed a dry hole, located SW SE SW section 9-11n-2w, Emerson Township. Eight other Gratiot County tests were carried on the weekly drilling report, one in each of eight townships.

Austin-Mecosta

Taggart Brothers, Inc., brought in another gas well in the Austin Township, Mecosta County, field, completing Hal-Be-Oyle & Gas Co. No. 5 Taggart, C SW SE section 11-14n-9w, with an open-flow capacity of 7,000,000 feet daily in the southeastern tip of the field.

New Locations

Two new permits for wildcat or semiwildcat locations were included among seven comprising the latest list issued by the state Conservation Department.

Daily Crude Oil Co. took out a permit for the No. 1 Frank Weatherby, SW SW SE section 20-12n-9w, Winfield Township, Montcalm County, about a mile south of several tests drilled for gas, one of which later was deepened to the Dundee but failed to find oil and was unsuccessful in returning to save the gas, a flow of about 6,000,000 feet daily from the Michigan Stray sand. That was in section 17, Winfield Township.

The Gordon Oil Co. was granted a permit for the No. 1-B Ray C. Havens, SE SE SW section 25-18n-1w, Buckeye Township, Gladwin County, an extension test in a newly opened field.

Wiser Oil Co. has invaded the village of Six Lakes with a location for the No. 1 James Clayton, C NE SW section 15-12n-7w, Belvidere Township, Montcalm County. It is on the railroad right of way skirting the southern boundary of the Tri-Townships field, Michigan's largest natural gas producing area.

Two more tests will be drilled in the Ferris Township section of the Crystal field and two in West Branch Township field, Ogemaw County, under new state permits.

Dry Holes

Three wildcat "dusters" also were recorded, one in Lapeer County in the southeastern section of the lower peninsula and two in northwestern Michigan.

Smith Petroleum Co. No. 1 Vaskowitz, SW SW SE section 10-9n-9e, Marathon Township, Lenawee County, was dry, plugged and abandoned.

Two Sylvania tests also were about to be plugged and abandoned in Logan Township, Mason County, namely: Sylvania Oil Co. No. 1 Campbell, NE SW SW section 10-17n-15w, and Dragoon Development Co. No. 1 W. K. Young, SW NW NW section 15. The latter had been testing a show of about 200 feet of oil in the hole for several weeks but failed to make commercial production with shot and acid. A Sylvania gas well about a quarter of a mile distant increased in flow after the shot, however.

Further drilling is planned in the area.

Jersey Tax Suit

NEW YORK, Sept. 14.—The Standard Oil Co. of New Jersey has filed suit against William Duggan, former collector of internal revenue, to recover $2,017,624.59 with interest at 6 per cent from August 31, 1931, the date when the money was paid. The company asserts the assessment was made to cover additional taxes, penalty and interest for 1922, 1923 and 1924, after the statute of limitations had nullified the claim.

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STOCK SIZES AND PHYSICAL DATA

SPECIFICATIONS	SIZE NUMBER 0	1	2	3	4	5	6	7
A—Outside Diameter—Inches	¼	½	¾	1	1¼	1½	2	3
B—Inside Diameter—Inches	1/16	5/16	½	¾	⅞	1	1½	2⅝
C—Length—Inches	¼	½	¾	1	1¼	1½	2	3
D—Approximate Number of Rings per Cubic Foot	85,000	10,600	3,140	1,325	678	392	166	49
E—Sq. Feet of Absorption Surface per 1,000 Rings	2.50	10.75	24	43	67	96	172	388
F—Sq. Feet of Absorption Surface per Cubic Foot of Tower Space	212	114	75	57	45	37.5	28.5	19
G—Pounds of Rings per Cubic Foot of Tower Space	46	27	34	27	31	34	27	23
H—Minimum Crushing Strength across Diameter—Lbs.	17	13	42	44	89	138	157	236
I—Load on Each Bottom Ring per 10 feet of Tower Height—Lbs. (Dry Rings)	0.25	0.56	1.6	2.25	4.0	6.4	9.0	17.5
J—Per Cent Free Gas Space	55	74	67	74	69	67	74	78
K—Square Feet Absorption Surface per Cubic Foot of Free Gas Space (F ÷ J)	387	155	113	77	65	56	39	25
L—Relative Scrubbing Capacity (F × J)	116	84	50	42	31	25	21	15

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North Louisiana, Arkansas

WILDCATTING SHOWS FRESH LIFE; MORE TESTS PLANNED

By MITCHELL TUCKER

SHREVEPORT, La., Sept. 14.—Important wildcats testing throughout the entire North Louisiana and East Texas border area featured the news for the week, with nine routine completions recorded in Rodessa. Wildcatting in this territory, having the new sand members of the Travis Peak as objectives following the recent Cotton Valley discovery, is taking on new life and plans are laid for many other important tests of known structures.

The eastern extension area of the Rodessa field was the major point of interest, as four of the five wells completed on the Louisiana side were at the extreme eastern edge of the proven limits, and will tend to encourage further outpost tests north toward Miller County, Arkansas, and east toward the town of Ida, La. The only new location staked for the week in Louisiana was at the extreme eastern edge of the pool, by Lion Oil Refining Co.

Northwestern Edge Defined

After more than one year's drilling, the first apparently dry hole was completed at Rodessa at the extreme northwestern edge of the pool in Cass County, Texas. American Liberty Oil Co. No. 1 G. Stephens, southwest corner of J. Garsner Survey, about 3½ miles north of the assumed position of the Rodessa fault line, tested all four zones of the lower Glen Rose without success. Salt water was tested in the Dees sand from 6,027 to 6,042 feet, and the well was plugged back to 5,900 feet. The casing was perforated from 5,765 to 5,820 feet with 55 shots, from 5,840 to 5,850 feet with five shots, and from 5,870 to 5,890 feet with five shots, for tests of the two upper gas zones, the Hill and Gloyd, which were found nonproductive. The well is now standing for orders. The Rodessa faulted anticlinal structure, with steeply plunging beds to the north on the upthrow side, was never thought to be more than 3½ to 4 miles wide at any point, and the position of this first dry hole does not detract from the formerly assumed productive acreage.

Occupying approximately the same position on the structure, but about 2 miles north and east of the American Liberty No. 1 Stephens failure, United Production Co. No. 2 E. J. Cunningham, Wilson Robinson Survey, also found all four of the producing zones nonproductive after thorough testing. This well has been temporarily abandoned at a total depth of 6,099 feet.

Rodessa Completions

Rodessa completions for the week were as follows:

Blackwell Oil & Gas Co. No. 3 Neugent, NE NE SE section 8-23-15, eastern extension area, flowed 5 bbls. of distillate daily, with 5,000,000 feet of gas, through three-sixteenths inch tubing choke, with tubing and casing pressure of 2,000 pounds, from a total depth of 6,074 feet.

J. G. Collins No. 1 Caddo School Board, situated on a two-acre tract in NW SE section 8-23-15, eastern extension area, flowed 20 bbls. an hour through three-quarter inch tubing choke from the Neugent sand at 5,930 to 5,941 feet, total depth 5,947 feet.

Lion Oil Refining Co. No. 2 Wynn, SW cor. section 9-23-15, eastern extension area, flowed 35 bbls. an hour through seven-sixteenths inch tubing choke, with 2,000,000 feet of gas, tubing pressure 675 pounds, casing pressure 450 pounds, saturation topped at 6,080 feet, total depth 6,094 feet.

Phillips Petroleum Co. No. 1 Innerstate Land & Royalty Co., NW NE NW section 16-23-15, northeast extension area, flowed 20 bbls. an hour through one-quarter inch tubing choke, casing pressure 1,250 pounds, tubing pressure 500 pounds, total depth 6,076 feet.

Standard Oil Co. of Louisiana No. 7 J. Caldwell, SE cor. section 12-23-16, flowed 130 bbls. an hour through 1¾-inch tubing choke, tubing pressure 225 pounds, casing pressure 450 pounds, total depth 6,046 feet.

Showers & Moncrief No. 3 T. D. and Sallie Stalcup, Robert Trammel Survey, Cass County, Texas, flowed 22 bbls. an hour through one-quarter inch tubing choke, tubing pressure 400 pounds, casing pressure 500 pounds, saturation topped at 5,962 feet, total depth 6,010 feet.

Showers & Moncrief No. 2 T. D. and Sallie Stalcup, Robert Trammel Survey, flowed 447 bbls. during the first hour through one-quarter inch tubing choke, casing pressure 800 pounds, tubing pressure 550 pounds, saturation topped at 5,980 feet, total depth 6,030 feet.

The Texas Co. No. 3 E. E. Hall, James Young Survey, flowed 67 bbls. an hour through 1-inch tubing choke, tubing pressure 50 pounds, casing pressure 100 pounds, saturation topped at 6,034 feet, total depth 6,098 feet.

Vaughn Production Co. No. 4 Willis, S.F.G.W. Survey, flowed 80 bbls. an hour through five-eighths inch tubing choke, casing pressure 1,300 pounds, saturation topped at 5,937 feet, total depth 5,980 feet.

Caddo Parish

Gulf Refining Co. No. 1 Hatcher, section 11-17-15, Cross Lake Prospect, caused a flurry of excitement when showings of oil prompted drill stem tests between 4,860 feet and 4,941 feet. This section, which formerly appeared to carry some saturation, tested dry on drill stem test, and operators are drilling ahead below 4,975 feet, in undetermined members of the Glen Rose series.

After topping the Travis Peak at 5,840 feet, Prairie River Syndicate No. 1 Hutchinson, SW NW section 15-15-12, is coring ahead in red shale at 6,145 feet.

Bill Morefield and others No. 1 Stokely, C section 5-20-16, routine completion in Caddo field, pumped 25 bbls. a day, total depth 955 feet.

In the same field, Stanolind Oil & Gas Co. completed its No. 107 Dillon heirs, section 14-21-15, for an initial pumping gauge of 100 bbls. a day after acidizing, total depth 1,698 feet.

In the same field Stewart-Williams No. 1 Rogers Means, section 10-20-15, pumped 20 bbls. initially from total depth of 2,250 feet.

Calatex Oil & Gas Co. No. 1 Whitworth, NW SW section 10-16-16, found only salt water in sand at total depth of 2,954 feet, and has been abandoned.

Bossier Parish

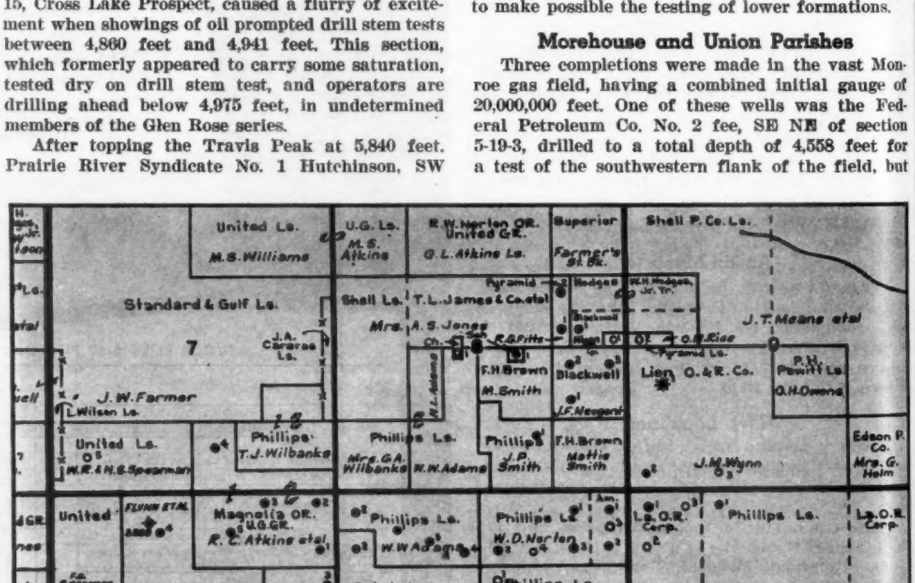
Triangle Drilling Co. No. 1 Skannal Unit, SE cor. section 23-17-12, important Travis Peak test of the Sligo gas field, topped the Travis Peak at 5,435 feet, and 7-inch casing has been set at 5,560 feet in preparation for testing. Total depth is 5,696 feet. This will be one of the first tests of the formation since its discovery as a source of major oil accumulation at Cotton Valley.

Bienville Parish

J. W. Leonard No. 1 Courtney, SE cor. section 5-17-7, formerly reported to be near the abandonment stage, was drilling and coring ahead at 6,211 feet for a thorough test of the sand members of the Travis Peak, recently found productive at Cotton Valley. H. L. Hunt, of Tyler, Tex., is reported to have purchased an interest in this block to make possible the testing of lower formations.

Morehouse and Union Parishes

Three completions were made in the vast Monroe gas field, having a combined initial gauge of 20,000,000 feet. One of these wells was the Federal Petroleum Co. No. 2 fee, SE NE of section 5-19-3, drilled to a total depth of 4,558 feet for a test of the southwestern flank of the field, but



—Walter E. Wylie, Maps, Shreveport.

Eastern extension area of Rodessa field, showing development nearing the town of Ida, La., and the Miller County, Arkansas, line

plugged back to 2,260 feet and completed through perforated casing.

Federal Petroleum Co. No. 1 fee, NE cor. section 34-21-3, deep test on the northwestern flank of the Monroe field, is drilling close to 7,000 feet and continues to receive close attention in this territory.

Claiborne Parish

The territory's deepest test, United Gas and others No. 2 Durrett, SW cor. section 31-20-5, Sugar Creek gas field, is fishing for 800 feet of stuck drill pipe at a depth of 8,616 feet.

DeSoto Parish

As an important completion in the Benson pool of southern DeSoto Parish, Union Petroleum Co. No. 1 Hill, section 3-10-13, pumped 60 bbls. a day from a sand member in the lower portion of the Upper Cretaceous. This well had previously been abandoned at 1,480 feet.

Estimated Daily Production

Estimated daily gross production all companies week ending September 11, 1936:

NORTH LOUISIANA

Bellevue	950
Caddo light	4,145
Caddo heavy	2,575
Converse	825
Cotton Valley heavy	295
Cotton Valley light	480
De Soto and Red River	1,455
Elm Grove	395
Haynesville	3,390
Holly	130
Homer	2,595
Pleasant Hill	140
Rodessa	59,605
Sarepta-Carterville	420
Urania	2,885
Zwolle	995
Total	81,280

SOUTH ARKANSAS

Champagnolle	2,250
El Dorado	2,110
Lisbon	295
Miller County	695
Nevada	865
Smackover light	2,195
Smackover heavy	17,465
Stephens	585
Urbana	1,685
Total	28,145

Texas side of Rodessa field—10,235 bbls. daily.

Sabine Parish

Foremost among the Sabine Parish wildcats now drilling is the deep test of the Converse pool, Cox & Whitehurst No. 1 Whitney Corp., NW NE section 8-9-13. After coring 3 feet of heavily saturated gas and distillate sand from 5,374 to 5,377 feet, the well blew out with an estimated 15,000,000 to 25,000,000-foot flow. After killing the well the drill pipe was found to be stuck, and after two weeks fishing, the pipe was recovered. Operators are now reconditioning the hole in preparation for drilling ahead, as great interest is shown in the first lower Glen Rose test of the Converse pool.

A. H. Tarver No. 2 Baker, NW NE of section 36-8-12, deep test of the Zwolle pool, is shut down due to water shortage, after making a drill stem test in the top of the Oolitic lime of the lower Glen Rose at a total depth of 5,200 feet. The test showed an estimated 1,000,000 feet of saturated gas.

J. R. Keen No. 1 Long Bell Mining Corp., section 5-8-13, formerly completed as dry and abandoned, showed for a producing well when operators began to pull casing and agitated the well. A standard pumping rig is being installed, after acidizing, and estimated gauges range from 50 to 250 bbls. a day.

Pearl Oil Co. No. 6 Crawford, SE SE section 20-9-13, has been junked and abandoned at a total depth of 3,487 feet.

Webster Parish

Webster Parish continues to command major attention in lease trading, following the deep discovery at Cotton Valley and new completions in the Sibley area.

Seven new locations, having as their objective the upper sand member of the Travis Peak (temporarily designated as the Holloway sand), have been staked following Ohio Oil Co.'s discovery recently. One well is drilling, three are rigging up, and three clearing locations. Woodley Petroleum Co. staked the two new locations for the week, one its No. 2-B L. C. Cox, SW SW section 23-21-10, and the other its No. 4-B Gray, NE NE section 27-21-10.

The Cotton Valley discovery well, Ohio Oil Co. No. 6 Holloway, produced 520 bbls. of oil through three-eighths inch tubing choke during a recent 24-hour gauge. What at first was supposed to be water is now believed to have been drilling fluid. Pressures appear to be slightly rising, indicating that the well is slowly cleaning itself. A slight decline in the gravity of the oil has been noted.

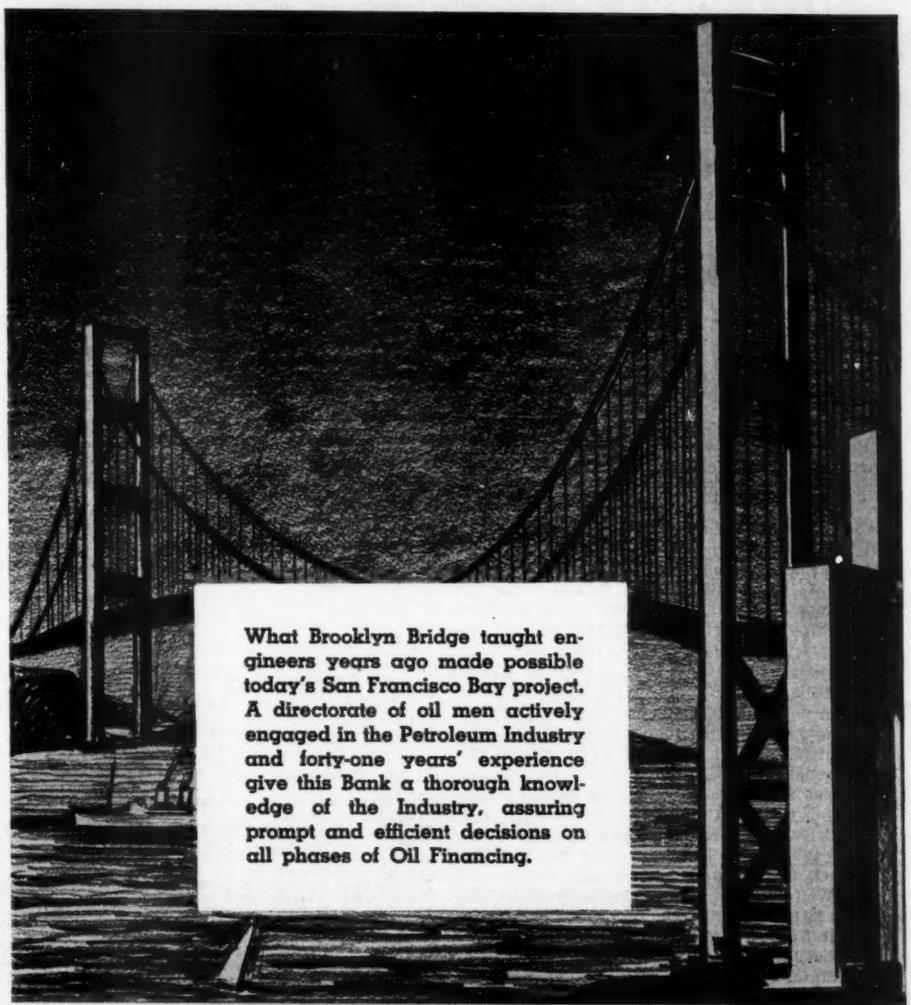
The Standard Oil Co. of Louisiana is considering extending a gathering line from the Baton Rouge trunk line into Cotton Valley, where it has about 600 acres of leases.

The J. P. Evans No. 1 Johnson, SW NW SW of section 36-18-9, second completion to be made in the Sibley area, proved to have an even greater potentiality than the discovery some four months ago. After drilling to a total depth of 5,781 feet, and encountering 84 feet of highly saturated gas and distillate sand in the upper portion of the lower Glen Rose, casing was set at 5,755 feet and cemented. Casing was perforated from 5,738 to 5,748 feet with 20 shots, resulting in a heavy showing of gas with some salt water. The hole was plugged back to the level of the discovery well, at 5,620 feet, and perforated from 5,586 to 5,615 feet. On official test the well flowed through three-quarter inch casing choke, and 2-inch tubing choke, gauging 70,000,000 feet of gas with a large amount of distillate which has not yet been gauged.

W. D. Ambrose No. 1 T. Crichton, SW SW NW section 36-18-9, one location north of the Evans-Johnson well, is now preparing to test after drilling to a depth below 5,850 feet.

Amerada Petroleum Co. is reported to be planning an immediate location to offset the Evans-

(Continued on Page 83)



Rocky Mountain Area

BYRON-GARLAND TEST MAKES 50 BARRELS OF OIL PER HOUR

By
T. R. INGRAM

DENVER, Colo., Sept. 14.—There were no completions or new operations reported in Colorado.

In Wyoming, the Stock Oil Co. No. 1 Yates, in the Bryon-Garland field, was completed in the Madison for 50 bbls. an hour. The Continental Oil Co. has contracted for the sale of 9,000 bbls. of black oil daily during the summer seasons for hotels in the Yellowstone National Park. The South Baxter Basin gas field was extended 1¼ miles in the Mountain Fuel Supply Co. No. 1 Nightingale. The Osage field had three completions, two of which were dry and abandoned.

Five wells were completed in the Cut Bank field, two were abandoned and three new operations were getting under way. Stanley Gray No. 3 Government, west end of the Kevin-Sunburst field, which opens considerable territory for development, pumped 160 bbls. first 24 hours. R. C. Tarrant's wildcat in the Mosser district, southern Montana, is drilling deeper after swabbing 100 bbls. of oil and then running into water.

NEW MEXICO

In the Eunice pool, Lea County, New Mexico, Continental Oil Co. 3-B-14 Lockhart, NW NE NE section 14-21-36, flowed 804 bbls. through three-fourths inch tubing choke and 784,000 feet of gas at 3,746-3,871 feet, total depth. Same company No. 3-D-15 State, C NE NE section 15-21-36 flowed 1,488 bbls. through three-fourths inch tubing choke and 2,130,000 feet of gas from pay at 3,791-3,875 feet, total depth. Empire Oil & Refining Co. No. 2 Clossen A, C NE SE section 6-22-36 made 264 bbls. through tubing and 3,000,000 feet of gas from pay at 3,760-93 feet, total depth 3,816 feet.

In the Cooper pool Southern Oil Corp. No. 2-A-15 Vaughn, C NW SE section 15-24-36 started at 480 bbls. through tubing with 500,000 feet of gas from pay at 3,595-3,610 feet, total depth.

In the Jal sand area Plains Production Co. No. 1 Knight, C NE SE section 21-24-37, flowed 230 bbls. through 5/64-inch tubing choke and 1,000,000 feet of gas from 3,425-70 feet, total depth. Plains Production Co. and Culberson & Irwin No. 1 Williams, C SW NE section 34-24-37 flowed 48 bbls. through tubing and 500,000 feet of gas at 3,376-3,512 feet, total depth.

Oil Well Drilling Co. No. 1 Clardy, C SE SE section 13-16-36, a wildcat was dry and abandoned at 5,065 feet.

In the Jackson area Eddy County, Etz Bros. No. 2 State, C NW SW section 16-17-30, was good for 35 bbls. initially at 3,140-3,276 feet, total depth.

In Chaves County Comanche Drilling Co. No. 2 Sloop & Purcell C NE NE section 15-11-26, was a 7-bbl. pumper at 1,246-83 feet, total depth.

In McKinley County Red Mountain Oil & Gas Co. No. 1 State SW NE SW section 21-20-9w, was abandoned at 175 feet; H. E. Seward and others No. 1 fee, SE SE NE section 19-20-9w, was abandoned at 627 feet; Claude Walker No. 3 fee, SW SW SE section 20-20-9w, was abandoned at 450 feet.

The State Oil Conservation Commission allocated 70,500 bbls. daily for New Mexico production during the first half of September. This compares with 78,000 bbls. for the first half of August, an increase of 1,500 bbls. Top allowable for Lea County wells was dropped from 96 to 91 bbls. per well per day. Allocation to Lea County was 75,405 bbls., and to the remainder of the state 4,095 bbls. The latter is distributed as follows:

Artesia	2,950
Hogback	300
Rattlesnake	750
Table Mesa	85
Aztec-Bloomfield	10
Total	4,095

Lea County marginal units which are allowed to produce at capacity are as follows:

	Units	Alloc.
Cooper	16	607
Eunice	25	996
Hobbs	4	113
Jal	33	1,215
Lea	2	81
North Lea	2	63
Monument	8	301
Total	90	3,376

Total allocation for Lea County, including marginal and nonmarginal units is as follows:

	Units	Alloc.
Cooper	91	7,432
Eunice	284	24,565
Jal	58	3,490
Lea	11	900
North Lea	2	63
Hobbs	244	22,183
Monument	188	16,681
Vacuum	1	91
Total	879	75,405

The Eunice pool now takes first place as to the number of 40-acre units on production and allowable outlet. It formerly was held by the Hobbs field.

Monument Area

Anderson-Prichard Oil Corp. No. 2 Britt "A," C NE SW sec. 6-20-37. T.D. 3,417 ft.; will drill by drill pipe.
Gulf Oil Corp. No. 1 Ketter, C SW SE sec. 20-19-37. Set 5½-in. csg. 3,850 ft.
Texas Co. No. 3 State-Aggies, NE cor. sec. 20-20-37. T.D. 3,498 ft.; drlg. by bad hole.
Humble O. & R. Co. No. 4 State-Aggies, sec. 31-20-37. Cellar and pits.
Shell Pet. Corp. No. 1-B Cooper, sec. 4-20-37. Drlg. 3,400 ft.
Amerada Pet. Corp. No. 2-A Phillips, sec. 31-19-37. Drlg. 3,299 ft.
Amerada Pet. Corp. No. 2-L State, sec. 20-19-37. Set 8⅝-in. csg. 2,556 ft.
Amerada Pet. Corp. No. 2-R State, sec. 29-19-37. Drlg. 1,209 ft.
Continental Oil Co. No. 3-A-3 Reed, C NE SE sec. 3-20-36. Drlg. 2,516 ft.
Gulf Oil Corp. No. 3 Mathews, C SE SE sec. 6-20-37. T.D. 3,981 ft.; flowed 99 bbls. in 7 hrs.; 8,000,000 ft. gas per day.
Tide Water Oil Co. No. 1 Anderson, C NW SE sec. 8-20-37. Testing at 3,877 ft.
Tide Water Oil Co. No. 1 Laughlin, C SE NW sec. 4-20-37. Drlg. 3,625 ft.
Amerada Pet. Corp. No. 1 Haney, C SW SW sec. 33-19-37. Drlg. 3,647 ft.
Humble O. & R. Co. No. 1 Laughlin, C SW NE sec. 4-20-37. T.D. 3,907 ft.; P.B. 3,885 ft.; testing.
Texas Co. No. 4 Phillips, C SE NW sec. 6-20-37. T.D. 3,900 ft.; flowed 450 bbls. in 5 hrs.; csg. weakened; trying to shut off water.
Continental Oil Co. No. 2-A-17 State, C SE SW sec. 17-19-37. Drlg. 3,295 ft.
Skelly Oil Co. No. 2 State "E," C NE NE sec. 29-19-37. Drlg. 3,300 ft.
Gulf Oil Corp. No. 1 Culp "B," NW NW SE sec. 31-19-37. Drlg. 2,550 ft.
Gulf Oil Co. No. 2 Culp "B," C NE SE sec. 31-19-37. Derrick.
Ohio Oil Co. No. 3 Barber, C SE SW sec. 32-19-37. Drlg. 1,930 ft.
Empire Oil & Ref. Co. No. 1 Laughlin, C NW SE sec. 5-20-37. Drlg. 2,345 ft.
Gulf Oil Corp. No. 7 Graham-State "C," C SW NE sec. 25-19-36. Drlg. 3,410 ft.
Gulf Oil Corp. No. 2 Martin, SE cor. sec. 25-19-36. Drlg. 3,634 ft.
Ohio Oil Co. No. 1 State-McGrail, C SE SW sec. 26-19-36. Drlg. 2,547 ft.
Shell Pet. Corp. No. 1 State "H," C NE SE sec. 20-19-37. Drlg. 1,315 ft.
Humble Oil & Ref. Co. No. 2 Laughlin, C NW SE sec. 4-20-37. Cellar and pits.
Amerada Pet. Corp. No. 3 Lambert, C NE NE sec. 6-20-37. Set 12½-in. csg. 405 ft.
Tide Water Oil Co. No. 1 State "I," SW SE SW sec. 16-20-37. Rig.
Continental Oil Co. No. 4-A-3 Reed, C SE SE sec. 3-20-36. Rigging up.

Eunice Area

Devonian Oil Co. No. 6 State-Heasley, C NE SW sec. 5-21-36. Drlg. 3,750 ft.
Gulf Oil Corp. No. 2 Graham-State "E," C NW SE sec. 6-21-36. Drlg. 3,390 ft.
Gulf Oil Corp. No. 1 Orcutt "C," C SE SE sec. 6-21-36. T.D. 2,040 ft.; fishing.
Gulf Oil Corp. No. 3 Collins, C SW NE sec. 14-21-36. Set 7⅝-in. csg. 1,425 ft.
Gulf Oil Corp. No. 3 Bell-State "C," C NE NW sec. 15-21-36. Drlg. 3,547 ft.
Gulf Oil Corp. No. 5 Orcutt, C NW NW sec. 5-21-36. Drlg. 3,890 ft.
Landreth Prod. Co. No. 2-D State, sec. 22-21-36. Drlg. 3,205 ft.
Mid-Continent Pet. Corp. No. 2 Marshall, C NW NW sec. 11-21-36. Drlg. 2,707 ft.
Continental Oil Co. No. 1-D-11 State, C NW SW sec. 11-21-36. Set 5½-in. csg. 3,830 ft.
Humble Oil & Ref. Co. No. 4 State-Aggies, C SE NW sec. 31-20-37. Drlg. 3,682 ft.
Sun Oil Co. No. 2 Adkins, C SE SW sec. 3-21-36. T.D. 3,100 ft.; fishing for drill pipe.
Shell Pet. Corp. No. 1 State "G," C NE NW sec. 6-21-36. T.D. 3,611 ft.; fishing for drill pipe.
Atlantic Oil Prod. Co. and Tide Water Oil Co. No. 2 Houston, NE SW NW sec. 7-21-36. T.D. 3,882 ft.; will test.
Humble O. & R. Co. No. 5 Knox, C SE SE sec. 10-21-36. Drlg. 619 ft.
Gulf Oil Corp. No. 10 Arnott-Ramsey "C," C SW NE sec. 21-21-36. Drlg. 3,182 ft.
Gulf Oil Corp. No. 11 Arnott-Ramsey "C," C NE SE sec. 21-21-36. Drlg. 3,796 ft.
Gulf Oil Corp. No. 1 Sunshine, C SW SW sec. 30-20-37. Rig.
Skelly Oil Co. and Sun Oil Co. No. 1 Adkins, C SW SW sec. 3-21-36. Rig.
Continental Oil Co. No. 2-D-11 State, C SW SW sec. 11-21-36. Rigging up.
Continental Oil Co. No. 3-D-11 State, C SE SW sec. 11-21-36. Set 10¾-in. csg. 312 ft.
Gulf Oil Corp. No. 1 Sunshine, C SW SW sec. 30-20-37. Rig.
Skelly Oil Co. and Sun Oil Co. No. 1 Adkins, C SW SW sec. 3-21-36. Rig.
Continental Oil Co. No. 2-D-11 State, C SW SW sec. 11-21-36. Rigging up.

Sims Area

Penrose and Rowan No. 3 Cary, C SE NW sec. 22-22-37. T.D. 1,305 ft.; waiting for tools.
Continental Oil Co. No. 1-A-15 Elliott, SE SE SE sec. 15-22-37. T.D. 1,142 ft.; drlg. plug.
Continental Oil Co. No. 1-A-21 Elliott, C SE SE sec. 21-22-37. Set 7-in. csg. 3,393 ft.
Gulf Oil Corp. No. 1 F. C. King, C SW NW sec. 5-23-37. T.D. 3,877 ft.; swabbed dry below packer; S.D.
Samedan Oil Co. No. 1 Hughes, C NE SW sec. 4-23-37. Drlg. 3,175 ft.
Ohio Oil Co. No. 1 Walden, C NE NE sec. 21-22-37. Drlg. 3,515 ft.
Skelly Oil Co. No. 1 Ella Simms "A," C SW SE sec. 3-22-37. Sand 3,550 ft.; flowed 23 bbls. per hour; 4,000,000 ft. gas per day.
W. H. Street et al No. 1 Wood, C W½ SE NE sec. 22-22-37. T.D. 350 ft.; set 12½-in. csg.

Hobbs Area

National Securities Oil Corp. No. 1 Linam, NE SE SW sec. 33-18-37; wildcat. Old well P.B. from 4,238 to 4,228 ft.; swbd. sulfur wtr.; no oil; S.D. for orders.

Cooper Area

Southern Oil Corp. No. 1 Gates, C SW NW sec. 23-24-36. T.D. 3,497 ft.; plugging back to 3,445 ft.
Skelly Oil Co. No. 6 Coates, C NE SW sec. 3-24-36. Drlg. 3,170 ft.

Lea County—Miscellaneous

Landreth Prod. Co. No. 1 J. W. Grizzell, C SE SW sec. 5-22-37. T.D. 3,780 ft.; flowed 20 bbls. per day of oil, 160 bbls. water.
Rowan et al No. 1 Mattern, C SW SE sec. 7-22-37. T.D. 3,746 ft.; flowed 5 bbls. fluid per hour, 95 per cent wtr.; testing.
C. & G. Oil Co. No. 1 E. Weir, C NE NE sec. 14-20-37. Drlg. bridge at 4,060 ft.; T.D. 4,075 ft.
Gulf Oil Corp. No. 1 L. M. Buffington, C SW SW sec. 13-25-37. T.D. 3,903 ft.; fishing.
Sun Oil Co. No. 1 Lanehart, C SE SE sec. 20-25-37. Drlg. 3,362 ft. Flowed 26 bbls. in 6 hrs. through tubing.
Skelly Oil Co. No. 1 Stuart, C NE NW sec. 15-25-37. T.D. 3,416 ft.; plugged back to 2,230 ft.
Williams & Cockburn No. 3 Miller, C SW SW sec. 23-17-32. T.D. 2,526 ft.; S.D.
Texas Co. No. 1 E. Fanning, C SE NE sec. 4-24-37. T.D. 3,701 ft.
Jal Natural Gas Co. No. 1 Bates, C NW SW sec. 20-25-37. Drlg. 2,855 ft.
Argo Royalty Co. No. 1 Lanehart, SW SE NE sec. 21-25-37. Drlg. 2,700 ft.
Magnolia Pet. Co. No. 1 Scharbauer-Edison, C NW NE sec. 29-16-35. Drlg. 4,525 ft.
Magnolia Pet. Co. No. 2 O. E. Carson, C NW NW sec. 33-21-37. Drlg. 2,990 ft.
Plains Prod. Co. and Culberson & Irwin No. 2 Knight, C NE SW sec. 14-24 37. Cellar and pits.
Republic Prod. Co. No. 2 Crosby, NW NW SW sec. 28-25-37. T.D. 3,310 ft.; sprayed 2,000,000 ft. gas; testing.
Stanolind O. & G. Co. No. 1 Langley, sec. 15-25-37. Set 10¾-in. csg. 517 ft.
Emperor Oil Co. No. 1 State, C SW SW sec. 5-21-36. Drlg. 1,365 ft.
Gulf Oil Corp. No. 1 Carr, C NW SW sec. 3-23-37. T.D. 3,886 ft.; P.B. 3,625 ft.; swabbed 17 bbls. in 18 hrs.
Brown-Reynolds No. 1 Purcell, C NE NW sec. 8-21-38. Wildcat; rigging up standard tools.
Leonard No. 3 Lanehart, C NE NW sec. 21-25-37. Cellar and pits.

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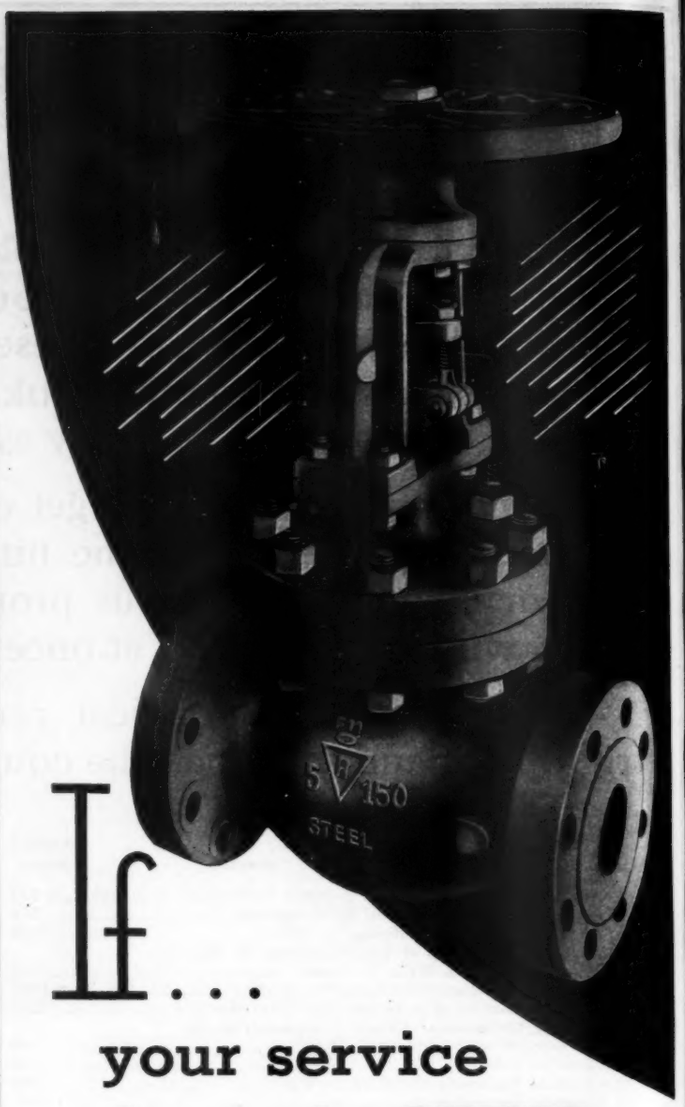

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Talbot-Mullineaux No. 1 Quincy-Ricker, C SE SE sec. 7-16-36. Wildcat; S.D. 200 ft.
J. C. Clower No. 1 Turner, C SE SE sec. 29-21-37. Rigging up machine.
Culberson-Irwin & Stovall No. 2 Stuart, NW SE SE sec. 10-25-37. Set 16⅛-in. pipe 90 ft.
Continental Oil Co. No. 1-A-30 Eaves, C NE NE sec. 30-26-37. Derrick.

Eddy County

Eis Bros. No. 3 State, sec. 16-17-30. Drlg. 2,065 ft.
Grayburg Oil Co. No. 7 Burch, C NW NE sec. 19-17-30. T.D. 3,153 ft.; flowed 422 bbls. in 24 hrs.; acidized; testing.
Carper et al No. 1 Gisler "B," NW NE NW sec. 23-17-30. Drlg. 3,193 ft.
Hammond et al No. 1 State, SW SE SW sec. 15-17-28. Drlg. 406 ft.
Pecos Valley Gas Co. No. 1 Andrews-State, C SW SW sec. 2-17-28. Set 6⅝-in. csg. 1,473 ft.
Republic Prod. Co. No. 6 Russell, SW NE NW sec. 18-17-31. Drlg. 2,340 ft.
Flynn, Welch & Yates No. 74 State, C S½ NE SW sec. 27-18-28. Drlg. 2,375 ft.
D. & B. Oil Co. No. 2 Berry, NW SE NW sec. 21-17-30. Drlg. 2,654 ft.
William Dooley No. 1 Hatchett, NE SW NE sec. 11-20-26. Wildcat; drlg. 420 ft.

Harding County

Kahay No. 1 Dae Daca, C sec. 19-20n-31e. T.D. 1,702 ft.; S.D.
Clyde B. Neill No. 1 Foster, C NW SW sec. 27-21-30. S.D. 700 ft.

DeBaca County

Mid-Continent Engineering Corp. No. 1 State, C NW SE sec. 27-4n-22e. T.D. 1,051 ft. in broken lime; S.D.

McKinley County

Claude Walker No. 2 fee, sec. 20-20n-9w. Drlg. at 100 ft.

Roosevelt County

Wirt Franklin and Flynn, Welch & Yates No. 1 Catta, C NW NW sec. 28-3n-30e. T.D. 898 ft.

NORTHWEST NEW MEXICO

Bernalillo County

Norine Realty Co., Inc., No. 2 Gallegas grant, SE NW NW sec. 19-11n-4e. Drlg. 2,050 ft. in gr. sh.

Guadalupe County

Anton Chico Dev. Co. No. 2 fee, NW NE SW sec. 20-9n-17e. S.D. 804 ft. (cor.).

McKinley County

Claude Walker No. 3 fee, SW SW SE sec. 20-20n-9w. Drlg. 410 ft.
Al Gibbons No. 2 fee, NW SW NE sec. 28-20n-9w. Drlg. 390 ft.
Foster & Clark No. 2 fee, NW NE NE sec. 29-20n-9w. Drlg. 400 ft.
S. Bouton, CEL NW NE sec. 4-14n-10w. S.D. 1,490 ft.

San Juan County

R. R. Burke No. 3 Govt., NW NW NE sec. 18-21n-13w. Loc. (first report).
Angel Peak Oil Co. No. 7 Govt., Lot 2, sec. 11-28n-11w. Drlg. 160 ft.
Jask Amenda No. 4 Hart, NW NE SW sec. 25-30n-12w. Drlg. 1,180 ft.
Continental Oil Co. No. 41 Tribal, NE NE NE sec. 35-30n-19w. Stdg. cmtd. 953 ft.

San Miguel County

Cabra Springs O. & G. Co. No. 1 Cabra Springs Ranch, SW NE NE sec. 22-12n-22e. C.O. to resume at 4,045 ft.
S. W. Pressey et al No. 1 Faulkner, NE NE NE sec. 25-17n-16e. Resuming at 5,082 ft. (formerly Star-Kennedy No. 3 Adams).

COLORADO

Adams County

Oklahoma Oil Co. No. 1 Baxter, C SW sec. 2-3s-66. S.D. 4,368 ft. for 4-in. D.P.
Glenridge Oil Corp. No. 1 Hills, SE SE SE sec. 27-3s-64w. S.D. 4,262 ft. for 6¼-in.

Archuleta County

William E. Hughes Est. No. 11 Gramps, NE of No. 10. Drlg. unreported depth.
Carl D. Linstrom No. 1 Crowley, SE SE SE sec. 3-32n-2e. R.U.
Maryott Drlg. Co. No. 1 Hollywood, SE SE SE sec. 15-34n-1w. Drlg. 615 ft.
Oil City Pet. Co. No. 1-A Garrett, NW NE NW sec. 25-33n-2e. P.B. to oil show at 970 ft.; 800 ft. of oil; prep. to test.
Oil City Pet. Co. and Archuleta O. & G. Co. No. 1 Reeder, Lot 5 (SW SE SW) sec. 24-33n-2e. T.D. 1,183 ft. in sd.; C.O. and U.R. 6¼-in.
H. L. Kendrick No. 1 Crowley (unsurveyed), sec. 2-32-1. Drlg. 1,167 ft.; will U.R. 6¼-in. for W.S.O.

Boulder County

Boulder Prod. Dev. Co. No. 2 Maxwell, NW NW NE sec. 24-1n-71. Drlg. 1,410 ft.; cmtd. 6⅝-in. at 1,398 ft.

Huerfano County

S. W. Pressey No. 1 Ojo, SW NE sec. 10-29s-69. O.W.D.D.; drlg. 3,1150 ft.; S.G.; object Dakota at 3,900 ft.

Jackson County

Colorado Oil Ref. Co. No. 1 North Park Coal Co., NW NW sec. 18-9n-78w. Drlg. 2,700 ft.; carrying 8¼-in.

LaPlata County

McGarr Pet. Co. No. 1 Pinon Mesa Land Co., CSL NE NE sec. 34-33n-12w. Cmtd. 6¼-in. at 3,450 ft.; D.D. to 3,680 ft.; S.D.

Larimer County

Continental Oil Co. No. 8 Buckeye-U. P., C NE SW sec. 1-10s-68. T.D. 4,240 ft.; prep. to cmt. 8⅝-in.

Lincoln County

Consolidated Smelting & Metals Co. No. 1 Hancock, NE NE SW sec. 7-17s-62. S.D. 2,050 ft.

Moffat County

Continental Oil Co. No. 1 Henderson, SW SW SW sec. 16-3n-91. T.D. 3,372 ft.; rmd. 7⅞-in. hole to 8¾-in. to 2,240 ft.; setting whipstock.
Mountain Fuel Supply Co. No. 1 Allen, NE SW SE sec. 32-12n-97w. Cg. 3,358 ft.; shows O. and G. in sd. at 3,060 ft.
Mountain Fuel Supply Co. No. 1 Kuyendall, NE NE SE sec. 22-12n-100. Drlg. 2,574 ft.

Morapas Pet. Co. No. 1 Cole, C SW SE sec. 1-3n-92. M.I. standard tools.

Morgan County

Swisher et al No. 1 Lunt, 92 ft. W of E line and 360 ft. N of S line, sec. 3-4n-60. T.D. 1,660 ft.; trying to S.O. wtr. from behind pipe.

Montezuma County

McElmo Oil Co. No. 1 West, NE NW NE sec. 21-26n-17w. S.D. 3,960 ft.

Park County

The South Park Oil Co. No. 1 Lemar in the Hartsel district has a unique fishing job. Hole was bottomed at 1,000 feet and the 12½-inch, which was being carried, was free in the hole, being moved with each shift. The crew going on duty found the tools would not go to bottom. Tools were pulled and it was found the pipe had been caught by an earth movement and four joints collapsed and shifted 2 inches out of alignment with the remainder of the string. Three joints have been recovered and the fourth is coming out.

South Park Oil Co. No. 1 Lemar, NE NE SE sec. 34-11s-75. T.D. 1,000 ft.; fsg. joint 12-in.
South Park Oil Co. No. 1 LeBert, NE NE NW sec. 31-11n-75w. T.D. 705 ft.; C.O.
South Park Oil Co. No. 1 State, SE NE SW sec. 16-11s-75w. Drlg. 4,872 ft.; carrying 4½-in. at 4,850 ft.

Routt County

Mid-Colo Pet. Co. No. 1 Omoholt, NE SE SE sec. 29-4n-87w. S.D. 2,910 ft.; renewing leases before drlg. into Sundance.

Washington County

I.T.I.O.-Carter-Foster Minerals Corp. No. 1 Vorce, C NE NE sec. 28-1s-49. T.D. 5,553 ft.; milling on junk at bottom of hole.

Weld County

Continental Oil Co. No. 2 Briggs, C NE SW sec. 13-6n-61. Drlg. 4,360 ft. in blk. sh.

Yuma County

Indian Territory Ill. Oil Co. No. 1 Strangways, C NW SW sec. 21-2s-43w. Drlg. 5,405 ft.

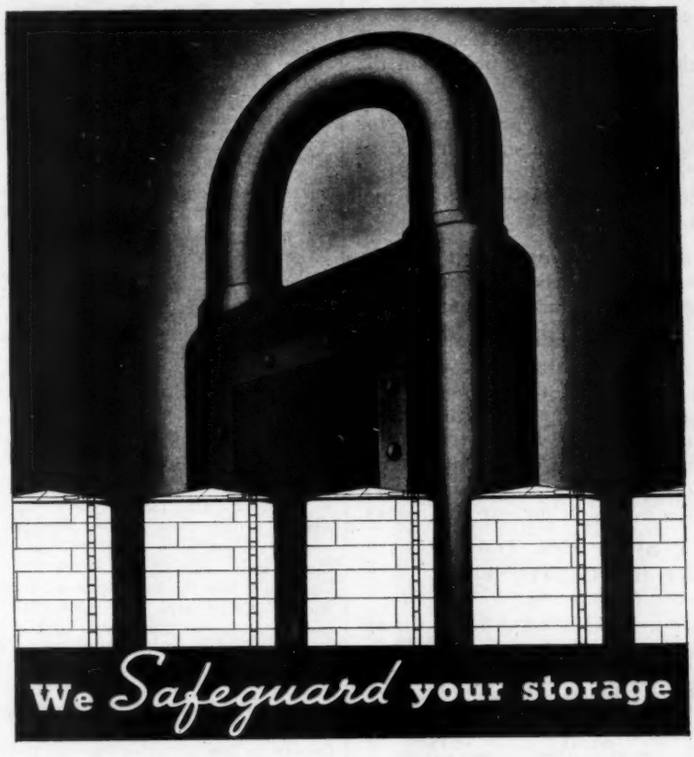
WYOMING

Albany County

Geo. D. Parkinson et al No. 1 George & Hunt, NW NE SE sec. 5-17-75w. Drlg. 4,050 ft.
California Co. No. 2 Wilson, SW SW SW sec. 18-17-76. T.D. 3,543 ft.; rng. wall scraper.
Ohio Oil Co. No. 1 Stiles, SW cor. sec. 12-15n-75. Drlg. 2,941 ft.
Hal Blakeman No. 1 Chapple, C NE NW sec. 31-21-76. Drlg. 950 ft.; 600,000 ft. gas in Frontier at 725 ft.

Big Horn County

The Stock Oil Co. No. 1 Yates, CSL SW NE



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Shrewd operators, all over the world, save time and money by using Shaffer Fishing Tools. Years of unexcelled performance have built a reputation for these tools as the most dependable and efficient on the market.

Shaffer Expanding Pin Taps are made for left-handing and backing-off strings of drill pipe "stuck" in tight holes when a tool joint or coupling is up. It is the only tool of its kind.

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Shaffer Rotary Releasing Sockets are designed for recovering drill pipe, casing, liners, tubing or any type of fish for which a socket may be used. Thousands of dollars worth of modern, efficient fishing tools—almost any tool you may ever need—are always available on our tool racks.

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EXPORT—OIL WELL SUPPLY COMPANY

section 33-56n-97, Byron-Garland field, one-fourth of a mile north of the Montana-Wyoming Oil Co. No. 1 Allen, which has been out of control since last January, was completed in the Madison lime at 4,206 feet for 50 bbls. an hour of clean oil after acidizing with 2,500 gallons. The lime was at 3,900-4,206 feet.

Montana-Wyoming Oil Co. No. 1 Allen, Lot 52, sec. 32-56n-97. T.D. 3,835 ft.; R.U.R.; prep. to go into hole to kill.
Montana-Wyoming Oil Co. No. 1-X Allen, Lot 52, sec. 18-56n-87w. T.D. 4,101 ft.; crd. sat. L. to 4,074 ft.; cmtd. 5 3/16-in. at 3,874 ft.
Ohio Oil Co. No. 2 Smith, CWL NW SE sec. 32-56-97. Drlg. 2,741 ft. (relief well for No. 1 Allen O.D. to Madison).
Ohio Oil Co. No. 1 Irene Lindsay, C NW SE sec. 23-56n-97. Drlg. 3,453 ft. in broken L.
Ohio Oil Co. No. 2 State, NE cor. Lot 38, sec. 36-46n-97. R.U.
Ohio Oil Co. No. 1 Orson Vail, SW NW NE sec. 23-56n-97w. T.D. 5,214 ft.; installing pump. equip.
Peay Oil Co. No. 1 Denio, Hr. 43-C, sec. 15-55n-87w. T.D. 3,845 ft.; prep. to run 6⅝-in.
Stock Oil Co. No. 1 Griffin, Lot 60, sec. 4-55n-97. Drlg. 542 ft. (formerly Peter Evanoff).
Peter Evanoff et al No. 1 McAllister, NW NE SE sec 3-55n-87. T.D. 2,895 ft.; fsg. bit; 6¼-in. at 2,640 ft.

Campbell County

G. J. Sherin et al No. 1 Rhodes, NE SE SW sec. 24-49n-74. Drlg. 191 ft.

Carbon County

Medicine Bow Oil Co. No. 1 Hintze-Govt., C NE SE sec. 18-22n-78. Drlg. 1,455 ft.
General Pet. Corp. No. 1 Union Pacific, SW NW sec. 19-83w. Drlg. 4,386 ft.
Ohio Oil Co. No. 11 Harrison & Cooper, NE SW SW sec. 35-20n-78. Drlg. 562 ft. sh. and shells.
Ohio Oil Co. No. 2 Dixon, SE NE NE sec. 34-20n-78w. R.U. to deepen old well from 8,094 ft. to Sundance.
Sinclair-Wyoming Oil Co. No. 10 Govt., SW SE NW sec. 7-26-89w. T.D. 4,228 ft.; P.B. to 4,073 ft.; to test S.G. before D.D.

Converse County

Chadron-Osage Oil Co. No. 1 State, SW SW sec. 16-32n-69w. T.D. 3,050 ft.; set 8¼-in. on bottom.
J. A. Olson No. 1 Reese, C NE SE sec. 10-32n-65w. M.I.M.

Fremont County

C. E. Nelson No. 1 Enos, Lot 7, section 27-3n-1w, Pilot Butte field, was completed at 685 feet for 5 bbls. naturally per day. Sand was at 628-685 feet. His No. 2 Enos is a first report.

C. E. Nelson No. 2 Enos, SW NE SW sec. 27-3n-1w. Drlg. 121 ft. (first report).
Tropic Oil Co. No. 1 Govt., C SE SW sec. 34-27n-90w. T.D. 2,550 ft.; rng. 4¾-in.
Sinclair-Wyoming Oil Co. No. 2-C Muskrat, NE SW SW sec. 1-33n-92w. Drlg. 6,183 ft. red sh.; passed out of dry Sundance (?); sd. at 6,024 ft.

Hot Springs County

A considerable market for black oil from Hot Springs County, and possibly Fremont County, has been developed as a result of a deal whereby the Continental Oil Co. will supply the Yellowstone Co., which has the hotel concession in the Yellowstone National Park, with 9,000 bbls. daily during the park season. The hotels in the park will be converted over to fuel oil for heating. The Salt Creek Transportation Co. has the contract for trucking the oil and tank trucks will be operated daily during the summer season. The oil will be taken from the Lake Creek field, in Hot Springs County, or the Maverick Springs field in Fremont County, depending upon which offers the best transportation facilities. The company has production in both fields.

Mountain States Power Co. No. 1 Mexico-Wyo., SW SW NW sec. 11-46n-99. O.W.D.D.; old T.D. 2,901 ft.; P.B. to 2,800 ft.; redrld. to 2,860 ft.; making some gas with water; will P.B. again.
Empire State Oil Co. No. 1 Larson, sec. 33-44n-93. Drlg. 715 ft.
Fruedenthal No. 6, SE SE NE sec. 21-43-92. T.D. 405 ft.; tested 4 B.P.D.; will D.D.

Laramie County

Amerada Pet. Corp. No. 1 Morton, C SW SW sec. 13-13n-68. T.D. 2,885 ft.; washing over and cutting pipe at 890 ft.

Lincoln County

Senrab Oil Corp. No. 3 Govt., CSL SE NW sec. 10-26n-113w. S.D. 1,020 ft.

Niobrara County

Argo Oil Co. No. 5 Elliott, C NW NW sec. 5-35n-65. Bldg. rig.
Continental Oil Co. No. 1 Rohlff, 200 ft. N of S line and 660 ft. W of E line, SE NW sec. 32-26n-65. Drlg. 3,373 ft. sh.
Continental Oil Co. No. 7 Rohlff, C NE SW sec. 23-36-65. Drlg. 3,543 ft. sh.
Bay-Elwell No. 1 Spaugh, C NW NE sec. 18-35n-65. Cmtd. 12½-in. at 230 ft.; W.O.C.
Holly Dev. Co. No. 1 Novick, NE SE SW sec. 6-35n-65. Bldg. rig.
Continental Oil Co. No. 4-A Schuricht, C NE SE sec. 6-35n-65. T.D. 3,725 ft.; installing blowout preventer; base Lakota 3,430 ft.; sat. sd. at 3,571-83 ft.; top Sundance 3,699 ft.
Lewis Gokel No. 1, NE SE NW sec. 31-35n-62w. Drlg. 880 ft. in Morrison.
Ohio Oil Co. No. 1 Elizabeth Lamb, C NE NE sec. 5-35n-65. Drlg. 3,646 ft.
Ohio Oil Co. No. 3 Richards & Comstock, 200 ft. S and N and 660 ft. W of E, NE SW sec. 32-36n-65w. Drlg. 2,468 ft.
Ohio Oil Co. No. 5 Converse Sheep, C SE SW sec. 32-36n-65w. S.D. below 4,600 ft.; believed to have cored top of Tensleep.
Riggs Oil Co. No. 2 Spaugh, C NW NE sec. 5-35n-65. Drlg. 310 ft.
Chester Oil Co. No. 1 fee, NE NE NE sec. 14-39n-61. Drlg. 926 ft.; 45 B.P.D. in Dakota at 778-808 ft.
S. & H. Dev. Co. No. 11-A Olinger, SW NE sec. 1-36n-63. T.D. 1,750 ft.; pulled 4½-in. and S.D.

Park County

General Pet. Corp. No. 1 Govt., NW NW NW sec. 33-47-100. Drk. up; M.I. equip.; contr. to Manning & Martin, Inc.
Resolute Oil Co. No. 1 State, C NW SW sec. 16-57-101w. Drlg. 6,905 ft.

Sublet County

Progressive Oil Co. No. 1 Haddenham, SE NW NW sec. 21-28n-113w. Drlg. 400 ft.

Sheridan County

Beaver Creek Oil Co. No. 1 Allison, SW SE sec. 15-55-85. Resumed at 3,081 ft.; drlg. 3,185 ft.

Sweetwater County

The South Baxter Basin gas field was extended 1¼ miles to the southwest in the Mountain Fuel Supply Co. No. 1 W. T. Nightingale, C SW NE section 32-16-104, which was completed at 2,754 feet for 7,500,000 feet of sweet gas per day from the Frontier at 2,680-2,754 feet.

Uinta County

Bridger Basin Oil Co. No. 1-B, NW NW SW sec. 10-14n-118. Drlg. 1,800 ft.

Washakie County

The Wyoming Oil & Refining Co. No. 2 Government, NW SW SW section 31-48-90, in the Hidden Dome pool, was abandoned at 1,404 feet when it was unable to recover lost tools. Three new operations in this field were reported.

Wyoming O. & R. Co. No. 4 Govt., NW NW NW sec. 31-48-90. Drlg. 111 ft. (first report).
Nystrom & Smoot No. 3 State, NE NE NE sec. 36-48-91. Spdg. (first report).
Yale Oil Corp. No. 1 Govt., SE SE SE sec. 25-48-91. Spdg. 97 ft. (first report).
Ariton & Doyle No. 1 Govt., SW SW SE sec. 29-48-91. Drlg. 1,085 ft.; cmtd. 8¼-in. at 1,046 ft.
Bruce Teeters No. 3 Govt., CWL SW SW sec. 30-48-90. Drlg. 1,522 ft.
Wyoming O. & R. Co. No. 1 State, NE SE NE sec. 36-48-91. Drlg. 1,485 ft.; carrying 8¼-in. at 1,456 ft.

Weston County

Al Jones No. 13 Bock, SW SW NE section 21-46-63, Osage field, was dry and abandoned at 700 feet. Charles Stough No. 3, C SW NW section 4-46-63, was dry and abandoned at 350 feet. Bert Higgins No. 4, NW NW SW section 4-46-63, was completed for a 38-bbl. pumper at 286 feet in shale.

Osage production in August was 24,560 bbls. and deliveries to refiners were 21,400 bbls.

John Brophy No. 1 Lemke, SE SE NE sec. 10-48n-65w. Drlg. 500 ft.
Conway Oil Corp. No. 1 Govt., C SE NW sec. 7-41n-60w. Cmtd. cave at 2,666 ft.; W.O.C.

MONTANA

Montana production in July showed a decrease of 33,166 bbls. as compared with June, as reported by the State Conservation Board. Total from all fields in July was 496,496 bbls. distributed as follows:

Kevin and Border	140,753
Cut Bank	270,322
Cat Creek	23,369
Pondera	37,083
Others	24,969
Total	496,496

Crude consumption was 578,773 bbls., which compares with 524,291 in June, an increase of 54,482 bbls. Of that quantity, 261,441 bbls. were refined in Montana, and 317,833 bbls. were shipped to Canada. The remainder went to Wyoming.

Oil in storage at the end of July was 1,221,298 bbls., a decrease of 82,277 bbls., distributed as follows:

Kevin and Border	439,096
Cut Bank	532,331
Cat Creek	133,148
Pondera	84,326
Others	32,397
Total	1,221,298

Big Horn County

Big Horn O. & G. Co. No. 27, CWL SE NE sec. 20-1s-33e. Completed at 711 ft.; 120,000 ft. gas in Frontier at 694-702 ft.
Daniels Pet. Co. No. 1 May, C SE SE sec. 13-1s-33e. S.D. 3,540 ft.
E. A. Lammers & Son No. 1 Berhold, SE SE sec. 6-1s-32e. Drlg. 150 ft.

Cascade County

C. Leonard Smith No. 1 Hines, SE SW SE sec. 14-22n-2e. Drlg. 203 ft.

Carbon County

Ohio Oil Co. No. 1 Northern Pacific, SE NE SW sec. 11-7s-21. T.D. 5,460 ft.; rmg. at 5,452 ft.
Henderson Producing Co. No. 1-H-11 Elk, 11, SE SE NW

It gives a pack of almost iron hardness, approximately 20 inches in length. It is easily set and just as easily released when removal is desired.

For a perfect pack, always specify Layne Ratchet Packer.

The Layne & Bowler Co., Houston, Texas

THE LAYNE PACKER

sec. 35-9s-23e. Cmtd. 15¼-in. at 102 ft.; drlg. plug.
Round Butte O. & G. Co. No. 2, CWL NE SE sec. 3-8s-23e. Drlg. 150 (cor.) ft. in Colo.

Fallon County

Montana-Dakota Utilities Co. No. 1 Unit, NE NE NW sec. 17-4n-62. T.D. 3,100 ft.; prep. to run pipe and test oil show in Devonian.
Montana-Dakota Utilities Co. No. 2 Unit 8, C NE SW sec. 8-4n-62. R.U.; W.O. tools.

Fergus County

Minnesota Co. No. 1 Fenholt, SE NW SW sec. 24-21n-18e, S.D. 1,100 ft.; tools still in hole.
Judith Operating Co. No. 2 Govt., NW NE sec. 5-22n-17e. Drlg. 2,775 ft. in Colo.; water in sd. at 2,580-2,610 ft.
Kalispel-Kevin Oil Co. No. 2 Emmons, C SW SE sec. 20-2s-18e. Drlg. 576 ft.
Emmons et al No. 3, SE NE NE sec. 6-21n-18e. Drlg. 420 ft.

Glacier County

Five wells were completed; two wells were abandoned and three new operations were reported in the Cut Bank field.

The Texas Co. No. 1 Hardwick, C SE NE section 17-32n-5w, swabbed 130 bbls. the first 19 hours before being shot at a total depth of 3,000 feet. The 7-inch was cemented at 2,940 feet.

The Texas Co. No. 1 Ray Miller, C NW NE section 32-33n-5w, swabbed 70 bbls. the first seven and one-half hours at a total depth of 2,982 feet. The 7-inch was cemented at 2,965 feet.

H. R. Patterson No. 1 Simero, C SE NE section 1-33n-6w, just north of the town of Cut Bank, where several dry holes were abandoned, was a good well and swabbed 210 bbls. the first 24 hours from the pay at 2,830-50 feet. The Sunburst at 2,745-55 feet was dry. Top of Cut Bank, 2,805 feet. Elevation, 3,700 feet.

A. E. Crumley No. 1 Allotment-112, C SW SW section 6-32n-5w, swabbed 108 bbls. the first 12 hours and then 5 bbls. an hour, from the pay at 2,942-58 feet. Total depth is 2,965 feet and elevation 3,690 feet. The Sunburst at 2,881-2,921 feet was dry.

R. C. Tarrant No. 6 Getty, SE NE SW section 2-34n-6w, has 1,500 feet of fluid in the hole at a total depth of 2,890 feet, but has not been tested. There was no Sunburst sand. Top of the Cut Bank was at 2,835 feet and the pay at 2,867-89 feet. Elevation, 3,848 feet.

R. E. Lee No. 1 Allotted-137, SE SW NE section 26-33n-6w, a wildcat half a mile west of production, which was a failure in the Cut Bank sand, was plugged and abandoned after going on down to test the Madison. Total depth was 3,260 feet. The Sunburst at 3,945-55 feet showed a little water. The Cut Bank sand at 2,870-80 feet was hard and tight. Top of the Ellis was at 2,980 feet and the top of the Madison at 3,160 feet. It had 2,000 feet of sulfur water at 3,160-85 feet.

Whetstone and others No. 1 Tribal-118, C SW SW section 1-32n-6w, was plugged and abandoned at 3,174 feet. A show of oil in the Sunburst at 3,080-92 feet was shot with 50 quarts and the Cut Bank at 3,133-50 feet was shot with 50 quarts. Top of Ellis, 3,174 feet. Elevation, 3,772 feet.

Kinchloe-Hanlon No. 2 State, NE cor. section 36-33n-6w, reported a completion last week, but not tested, is pumping 80 bbls. a day.

The Montana Power Gas Co. No. 2 Miller, SW SE NW section 32-33n-5w, reported a completion last week, but not tested, averaged 84 bbls. on a four-day pumping test.

The Montana Power Gas Co. is again pumping its wells after being shut in for two months. The Toronto Pipe Line Co. discontinued its connections on July 1. The Montana Pipe Line Co. is now taking oil from the company's wells.

British-American Oil Co. No. 11 Tribal, Lot 7, (NW NE) sec. 10-34n-6w. Cmtd. 7-in. 2,894 ft.; W.O.C.
A. B. Cobb No. 2 Jackson-Reagan, NE NE NW sec. 5-32n-5w. Drlg. 1,385 ft.
Consolidated Gas Co. No. 2 All.-114, C SE SW sec. 31-33n-5w. T.D. 2,855 ft.; drlg. up bailer.
B. V. Hole No. 1 All.-124, 640 ft. out of NE cor. sec. 1-32n-6w. T.D. 3,048 ft.; drlg. by tools at 2,985 ft.
Montana Power Gas Co. No. 2 Gaines, CSL SW NW sec. 6-33n-5w. R.O.G. (first report).
Montana Power Gas Co. No. 1 Hattie Miller, C NW sec. 1-35n-5w. Spdg. 370 ft.
H. R. Patterson No. 1 Chatterton, SE SE NE sec. 22-32n-6w. Drlg. 2,650 ft.
Santa Rita O. & G. Co. No. 1 Shubat, C NW sec. 33-34n-5w. Loc. (first report).
R. C. Tarrant No. 3 State, NE SE NE sec. 36-34n-6w. Spdg.
R. C. Tarrant No. 3 Reickhoff, C NE NE sec. 36-32-6w. Spd. 50 ft. and S.D.
R. C. Tarrant No. 8 Haglund, Jr., CEL NE NW sec. 13-34n-6w. Spdg. 330 ft.
Texas Co. No. 3 Tribal-122, CSL SW SW sec. 6-32n-5w. T.D. 315 ft.; rng. 10¾-in. (first report).
Vern Johnson No. 1 Tribal 116, C NE NE sec. 35-35n-6w. Drlg. 2,625 ft.

(Continued on Page 87)

With Oversize Standing Valve

BUILT FOR THE DIFFICULT JOB

When you examine the O'Bannon Arrow Pump it's evident why it performs so well under severe conditions.

It is a metal-to-metal pump with cold drawn traveling tube and alloy cast iron stationary plunger. Of simple design, with large fluid capacity, its ability to resist wear and corrosion is outstanding.

O'Bannon Arrow Pumps are made for 2 and 2½-inch tubing, fitted with plain or hardened plunger, plain or "Cro-Lay" tubes; available in several pump and plunger lengths and with oversize or plunger standing valve.

With Plunger Standing Valve

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Tulsa, Oklahoma

O'BANNON ARROW PUMPS

Kansas Developments

WILDCAT IN SALINE COUNTY MAKES FAVORABLE SHOWING

By DAL DALRYMPLE

The discovery of oil in Saline County, north of McPherson County, and 25 miles from the nearest producing oil field was the feature of the week in Kansas. Ryan Consolidated Oil Co. No. 1 Norton, NE NE NE section 32-14-2w, had Viola lime showing good saturation from 3,315 to 3,415 feet. The bailer was run for two or three hours and brought up oil at the rate of 7 bbls. per hour. The oil is black and the gravity is estimated from 32 to 35 degrees. Seven-inch casing was set and cemented at 3,315 feet. The crew was preparing to acidize.

Estimated Daily Production

Estimated daily average production in Kansas for the week ending September 12, and for the preceding week, is as follows:

	Barrels	
	Sept. 12	Sept. 5
Oxford City	3,800	3,550
Burrton	14,150	14,650
Ritz-Canton	5,900	6,300
Hollow-Nikkel	3,800	3,925
Voshell	2,950	3,000
Ellsworth County:		
Lorraine-South Lorraine	6,008	4,735
Other pools	1,840	1,372
Rice-Barton Counties:		
Chase	10,005	9,620
Raymond	2,355	3,175
Silica	13,375	11,330
Keesling	2,370	2,940
Miscellaneous Rice	7,522	6,366
Miscellaneous Barton	4,469	3,731
Russell County:		
Fairport	2,055	1,075
Gorham-East Gorham	5,630	4,845
Russell	2,955	2,860
Sullivan	2,565	2,555
Other pools	7,002	6,310
Sedgwick County:		
Valley Center	1,280	1,320
Greenwich	1,340	1,290
Robbins	1,140	1,115
Eastborough	820	840
Other pools	379	400
Ellis County	3,754	2,917
Kingman County	565	512
Stafford County	2,394	1,868
Greenwood County	10,358	10,250
Butler County	18,000	17,800
Other fields	25,069	25,849
Total Kansas	162,850	156,500

Russell County

Five wells were completed in Russell County. W. I. Southern No. 1 Boomhower, NW SW NW section 32-15-13w, had Siliceous lime at 3,290-94 feet, was acidized with 4,000 gallons and produced 2,391 bbls. in 24 hours. Same operator's No. 5 Shaffer, SW NE NE section 31-15-13w, was another good one. It had Siliceous lime at 3,254-57 feet, total depth, and after 4,000-gallon acid treatment made a potential of 2,184 bbls.

Coralena Oil Co. No. 5 Trapp, SE SW SE section 30-15-13w, was good for a potential of 2,608 bbls. in 24 hours from Siliceous lime at 3,252-56 feet, total depth, acidized with 4,000 gallons.

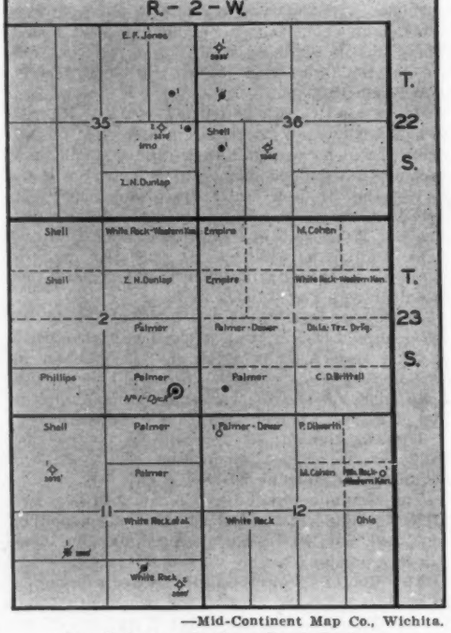
Skelly Oil Co. No. 2 Ehrlich, NW SW NE section 25-14-15w, started at 964 bbls. per day from Gorham sand at 3,151-55 feet, total depth 3,162 feet, acidized with 1,500 gallons. Same operator's No. 1 Henry Boxberger, NW NW NE section 33-13-14w, made a potential of 1,054 bbls. after a 1,000-gallon acid treatment at 3,284-90 feet, total depth.

First report of new work in the field include Witt No. 4 Witt, SW NE SE section 3-14-15w, moving in material; W. I. Southern, Inc. No. 7 Shaffer, SE NW NE section 31-15-13w, rigging up rotary; Shell Petroleum Corp. No. 2 Michaelis, NW SE NE section 31-15-13w, cellar.

Central Petroleum Co. No. 3 Rusch "B," C S half NE SW section 19-12-15w, Russell County, produced 4½ bbls. of oil an hour at 2,957-61 feet. It was acidized, and swabbed 30 bbls. of oil an hour, cutting 3 per cent water. Operators deepened, had Oswald lime at 2,998 to 3,025 feet, and set 5-inch liner there. Stanolind Oil & Gas Co. No. 2 Gideon, SW NE NW section 8-15-14w, had Siliceous lime at 3,312-19 feet, total depth, and swabbed 3 bbls. of oil an hour. Seven-inch casing was set at 3,283 feet. W. I. Southern, Inc., No. 4 Sellens, SW NW SW section 29-15-13w, had Siliceous lime at 3,304-05 feet, and oil rose 2,800 feet in the hole. Liner was set at 3,304 feet and it was waiting on cement. Derby Oil Co. No. 1 Michaelis, NE SE NW section 31-15-13w, pumped 563 bbls. of oil in 17 hours, down seven hours; total depth, 2,896 feet. Shell Petroleum Corp. No. 1 Michaelis, NE SE NE section 31-15-13w, had Siliceous lime at 3,311-19 feet, total depth, and pumped 1,000 bbls. of oil in 19 hours.

Ness County

Continental Oil Co. No. 1 Thompson, 1,320 feet from south and 440 feet from east lines of SW quarter section 13-18-26w, in Ness County, was given a potential test and produced 684 bbls. of oil in 24 hours from Siliceous lime at 4,446-92 feet. This is a wildcat which came in last June making a 557-bbl. potential at that time after a 4,000-gallon acid treatment at a total depth of 4,462 feet. It was deepened to 4,505 feet and then to 4,527 feet, where it opened up some water. It was plugged back to 4,492 feet and acidized in July, but was shut in for about seven weeks before its completion test was made. It is southwest of the Aldrich pool.



—Mid-Continent Map Co., Wichita.

Tom Palmer and others No. 1 Dyck, section 2-23-2w, second producer in the new Warkentine pool, Harvey County, flowed 911 bbls. in 24 hours, on completion test. It is south of Halstead pool

Trego County

Continental Oil Co. No. 1 J. H. Carpenter, C NW NW section 23-11-23w, Wakeeny pool, Trego County, was acidized at a total depth of 3,632 feet and produced one-half barrel of oil and 2 bbls. of water and was abandoned. Total depth 3,775 feet, plugged back to 3,632 feet.

Alma Petroleum Co. and McNeely has rotary rig up for No. 2 Kraus, C SW SE section 15-11-23w.

Ellis County

Uscan Oil Co. No. 2 Bemis, NW NW NE section 21-11-17w, Ellis County, acidized with 2,000 gallons at 3,369-75 feet, made a potential production of 1,193 bbls. of oil and 33 bbls. of water.

Winkler & Koch have cellar dug for a wildcat in Ellis County, No. 1 Jensen, SW SW NE section 3-13-18w.

Muutal Oil Co. No. 1-A Johnson, NW SW NE section 9-13-19w, Ellis County, swabbed 150 bbls. of oil and 120 bbls. of water in one hour, after plugging back from 3,808 feet, total depth, to 3,680 feet and acidizing. It then plugged back to 3,600 feet and was waiting on cement. Top of Oswald lime was 3,434 feet; Siliceous, 3,750 feet.

Ellsworth County

Rotary rig is up for Empire Oil & Refining Co. and others No. 4 Janssen B, SE SW SW section 34-17-8w, Ellsworth County.

Rice County

In the Hauschild pool in Rice County, E. J. Shaffer and others No. 3 Hauschild, SE NW NE section 15-21-7w, started at 2,706 bbls. per day from Chat at 3,375-96 feet. Douglas Oil & Gas Co. No. 3 Hauschild, SE NE NW section 15-21-7w, flowed 2,250 bbls. in six hours and was given a potential of 8,750 bbls. per day from Chat at 3,375-89 feet. Both wells were completed.

Empire Oil & Refining Co. No. 1 Jones, NW NW NE section 17-20-9w, in the Chase pool, had Siliceous lime at 3,273-80 feet, total depth, acidized it with 3,000 gallons and it made a potential of 776 bbls. per day and was completed. Roy Ramsey No. 5 Hilton, SE SW SW section 6-20-9w, found Siliceous lime at 3,278-84 feet. It was acidized with 1,000 gallons and was completed as a 1,190-bbl. well but with 400 bbls. of water.

Continental Oil Co. completed No. 1 Meyer, NW NW SW section 30-18-7w. It made a potential production of 1,746 bbls. after a 2,000-gallon acid treatment at 3,140-3,200 feet, total depth.

C. E. Skiles and others No. 2 Edwards, SW NW NE section 3-18-8w, was abandoned. It was a hole full of water from Siliceous lime at 3,307-12 feet, total depth.

Garden and others have rotary rig up for No. 3 Hauschild, SW NE NE section 15-21-7w. Magnolia Petroleum Co. rotary rig is up for No. 1-A Boyer, NW NW NW section 7-20-10w.

Gulf Oil Corp. No. 3 Emma Steckel, SW SE NE section 31-19-10w, Rice County, had Siliceous lime at 3,275 feet; set 7-inch casing at 3,276 feet and had 1,000 feet of oil in the hole. Shell Petroleum Corp. and others No. 2 Hafermann, C SE section 6-19-9w, topped Siliceous lime at 3,219 feet; total depth, 3,250 feet. It produced 1½ bbls. of oil an hour; was acidized and pumped 2 bbls. of oil an hour. It then was shot with 10 quarts and was cleaning out. Same operators' No. 3 Sherman "B," SE SW NE section 16-19-9w, was acidized and waiting after oil rose 700 feet in the hole. Top of Siliceous lime was 3,216 feet; total depth, 3,231 feet. J. H. Tatlock No. 8 Berscheit, NE SW NW section 6-20-10w, swabbed at the rate of 21 bbls. of oil an hour after finding Siliceous lime at 3,262-80 feet, total depth. Darby Petroleum Co. No. 4 Johnson, SW cor. section 10-21-7w, topped Chat

at 3,353 feet; set liner at 3,369 feet; total depth, 3,386 feet; and swabbed 140 bbls. of oil in 24 hours.

McPherson County

Continental Oil Co. No. 4 Graber, C SE SE NW section 32-21-1w, McPherson County, made a potential production of 305 bbls. in 24 hours, together with 170 bbls. of water, from Hunton lime at 3,304-40 feet, total depth. It had been acidized with 4,000 gallons.

Continental Oil Co. No. 1 Wenger, NW cor. section 21-21-1w, made a potential of 1,622 bbls. per day from Hunton lime at 3,303-27 feet. It was not acidized.

Roth & Faurot No. 1 Logback, SW SE NE section 12-19-3w, was a hole full of water at 3,019-37 feet and was abandoned.

Marion County

Barbara Oil Co. No. 1 Hane, NE NE SW section 4-18-5, Marion County, got a hole full of water from Siliceous lime at 2,621-27 feet and was abandoned.

Barton County

Magnolia Petroleum Co. No. 7 Steckel, NW SE NW section 1-20-11w, Barton County, was good for 529 bbls. per day at 3,287-3,301 feet, and was completed. It had been acidized with 1,000 gallons.

Texas Co. No. 3 Bloomer, SW NW NE section 36-17-11w, in the Bloomer pool, made a 24-hour production of 2,569 bbls. from Siliceous lime at 3,268-74 feet, and was completed.

Republic Oil Co. had rotary rig up for No. 3 Bloomer, SE SE NW section 36-17-11w. Sinclair Prairie No. 4 Isern, SE SW SW section 25-19-11w, is a rotary rig.

L. A. Farris and others No. 1 Snyder, SE SE NW section 3-21-11w, an old well deepened from 3,111 feet to 3,138 feet got a fresh start, producing 737 bbls. in 24 hours.

G. H. Rose and W. H. Lant No. 1 Redetzke, NE NW NW section 10-16-11w, a wildcat in Barton County, topped Kansas City lime at 3,020 feet, and had 800 feet of oil in the hole while drilling at 3,175 feet. Slick, Pryor & Lockhart No. 1 Meyers, SE NE section 13-17-11w, topped Siliceous lime at 3,285 feet; had pay at 3,302-11½ feet, total depth, and oil rose 2,800 feet in the hole in eight hours. Yarnell & Carlson and others No. 1 Gemeinhardt, NE NE SW section 36-17-11w, pumped 622 bbls. of oil in 13 hours and was acidized. Top of Siliceous lime was 3,269 feet; total depth, 3,276 feet.

Stevens County

Texas Interstate Pipe Line Co. completed a 11,500,000-foot gas well in No. 1-3 Gregory, C SE section 30-33-38w, Stevens County, at 2,500-25 feet, total depth 2,777 feet.

Reno County

Tide Water Oil Co. No. 2 Burrton State Bank, C S half S half NW section 17-24-4w, Reno County, started at 346 bbls. per day from Chat at 3,312-62 feet.

Sinclair Prairie Oil Co. No. 4 Matlock, C SE SW section 3-24-4w, acidized with 4,000 gallons at 3,270-3,361 feet, made a potential of 1,534 bbls. of oil and 93 bbls. of water.

Deal Oil & Gas Co. No. 7 McElwain, SE NE SE section 34-23-4w, had Chat at 3,252 feet, but set pipe at 3,318 feet and drilled to 3,352 feet. It made a potential production of 226 bbls. per day.

Manning & Martin, Inc. No. 4 Goering, NE NW NE section 1-23-4w, was good for 330 bbls. initially from Chat at 3,255-3,347 feet, total depth.

New work in Reno County included Magnolia Petroleum Co. No. 2 Harris, NE NW NW section 9-26-4w, rotary rig up; Stanolind Oil & Gas Co. and Amerada Petroleum Corp. No. 1 J. F. Moore, NE NE SE section 8-26-4w, building rotary rig; Sinclair Prairie Oil Co. No. 2 Baker, C NW NE section 10-24-4w, rigging up rotary; Sinclair Prairie Oil Co. No. 5 Matlock, SE NE SW section 3-24-4w, rigging up rotary; Maxwell Oil Co. and others No. 1 Heidebrecht, SW SW NE section 36-22-4w, building rig; Shell Petroleum Corp. No. 3 Reese, 1,508 feet from south and 420 feet from east lines of SW quarter section 11-26-9w, rigging up rotary.

Shell Petroleum Corp. No. 4 Hoskinson "A," C SE NE section 9-24-4w, Reno County, had Chat at 3,285-3,393 feet, total depth. It pumped 40 bbls. of oil an hour, cutting 6 per cent water. S. J. Houston and others No. 2 Mount, SW NW NE section 20-24-4w, swabbed 528 bbls. of oil in 24 hours. Top of Chat was 3,328 feet; total depth, 3,382 feet. Seven-inch casing was set to 3,333 feet.

Sumner County

In Sumner County, Olson Oil Co. and Shell Petroleum Corp. No. 4-A Community, 140 feet north and 1,235 feet west of SE cor. section 11-32-2e, Oxford pool, is a 485-bbl. completion in Dolomite at 2,995-3,020 feet, total depth. It produced 30 bbls. of water with the oil.

Stelbar Oil Corp. No. 7 Erker, C W half W half SW section 33-31-1w, in the Wellington pool, was acidized with 6,000 gallons in Chat at 3,622-76 feet, total depth, and made a potential production of 1,680 bbls. per day.

Stelbar Oil Co. was rigging up rotary for No. 9 Erker, 495 feet north and 330 feet east of SW cor. section 33-31-1w. Empire Oil & Refining Co. made location for No. 1 Hoffman, a wildcat, NW NW SW section 27-24-1e.

Butler County

F. G. Holl and others No. 3 Graves, CSL NW NW section 17-29-4, Butler County, was abandoned at 1,858 feet. It made an 8-bbl. initial production after a 1,000-gallon acid treatment early in August.

Flint Hills Oil & Gas Co. No. 2 Rollins, C NW SW section 23-28-4, was completed as a gas well, good for 100,000 feet per day at 1,487-1,525 feet.

Mohawk Oil Co. No. 2 Edgar, SE SE NW section 2-28-8, set 10-inch casing at 745 feet and was drilling at 1,010 feet. Empire Oil & Refining Co. was moving in material for No. 15 Lathrop, 263 feet north and 1,335 feet west of C section 17-23-4.

Kingman County

J. M. Ratcliff has a 14,600,000-foot gas well in No. 7 Ratcliff, C NE NW section 30-27-10w, Kingman County. Gas sand was topped at 2,035 feet, total depth 2,200 feet. It had been acidized.

Greenwood and Woodson Counties

Seifert and others No. 1 Woolner, NW SE NE section 33-25-14, Woodson County, was dry and abandoned at 1,482 feet. It was shot with 360 quarts at 1,399-1,439 feet, but only a showing of oil resulted.

C. L. Sheedy and others No. 4 Warner, SW SE SW section 21-25-14, Woodson County, is a 20-bbl. completion at 1,411-22 feet, shot with 160 quarts.

H. S. Moss Petroleum Co. No. 8 Pixley, NE SE NE section 7-22-10, Greenwood County, is a 50-bbl. well at 2,331-55 feet.

Considerable new work is reported from the Greenwood and Woodson sectors: Ladd and others No. 1 Lauber, NW NW NW section 4-25-14, Woodson County, drilling at 355 feet; Holmes and others No. 1 Holmes, 1,100 feet south and 250 feet west of NE cor. section 25-25-14, rigging up machine; Houston-Oklahoma Oil Co. No. 4 Berry, NW cor. SE section 28-23-13, shot with 50 quarts at 1,709-40 feet, produced 25 bbls. initially and was completed; Houston-Oklahoma No. 5 Berry, NW cor. SW SW NE section 28-23-13, set 8-inch pipe at 932 feet and drilling at 985 feet; Franklin Drilling Co. No. 5 Rossillion, NE SE SE section 1-23-14, rigging up machine; Hinze and others No. 1-B Hanne, C N half NE SW section 12-23-14, moving in machine; C. L. Sheedy and others No. 4 Tipton, NE NE NW section 28-25-14, rigging up machine.

Graham County

Sam Murphy and John S. Alcorn have rotary rig up for a wildcat test in Graham County, No. 1 Wamhoff, C NW section 27-10-22w.

Stafford County

Stanolind Oil & Gas Co. abandoned its wildcat test, No. 1 Evans, NW NW SW section 3-23-11w, Stafford County. It was a hole full of water from Siliceous lime at 3,703-75 feet, total depth.

Empire Oil & Refining Co. No. 2 Sifers, SE NE SW section 3-21-11w, was completed. It started at 193 bbls. of oil and 120 bbls. of water from Siliceous lime at 3,325-28 feet. Empire Oil & Refining Co. No. 1 Keeler, NW NW SE section 3-21-11w, was acidized with 3,000 gallons at 3,323-33 feet and made a potential of 932 bbls. per day.

Lario Oil & Gas Co. No. 1 Tudormorgan, SE SE NW section 23-24-13w, was being rigged up to deepen from 3,628 feet. C. E. Skiles has rig up for No. 1 Leidigh, NW SW SW section 21-22-11w.

Rush County

C. L. Sheedy is rigged up to start a wildcat in Rush County, No. 1 Bison, SW SW SW section 35-16-17w.

Barber County

Vaccars Corp. No. 1 Swartz, SE cor. section 30-31-11w, Barber County, flowed at the rate of 40 bbls. an hour, cutting 1.6 per cent water. It topped Chat at 4,304 feet; had pay at 4,315-16 feet, total depth.

Pawnee County

Simpson Oil Co. and others No. 1 Gates, SW cor. section 13-20-16w, wildcat pool opener in Pawnee County, made a potential of 187 bbls. of oil in 24 hours, from Siliceous lime at 3,815 feet; total depth, 3,819 feet. Gravity of oil was 36 degrees, corrected. Gas was estimated at 5,000,000 feet. Top of anhydrite was 1,088 feet; Kansas City lime, 3,511 feet.

Crude Oil Stocks

Stocks of domestic and foreign crude petroleum at the close of the week ending August 29 totaled 301,786,000 bbls., according to the Bureau of Mines, a decrease of 1,322,000 bbls., comprising a decrease of 1,323,000 bbls. in stocks of domestic but an increase of 1,000 bbls. in stocks of foreign crude. Imports continued to decline, the daily average being 64,000 bbls., or half of what it was three weeks ago. Daily average crude runs to stills were about 3,070,000 bbls., or 85,000 bbls. higher than for the week ending August 22.

STOCKS OF CRUDE PETROLEUM

Grade of crude oil—	Aug. 22	Aug. 29
Pennsylvania Grade	4,029,000	4,123,000
Other Appalachian	688,000	708,000
Lima-N. E. Indiana-Michigan	1,311,000	1,226,000
Illinois-S. W. Indiana	10,142,000	10,133,000
N. Louisiana and Arkansas	10,409,000	10,522,000
West Texas and S. E. New Mexico	29,192,000	29,533,000
East Texas	20,889,000	21,386,000
Other Mid-Continent	120,183,000	119,282,000
Gulf Coast	28,700,000	28,346,000
Rocky Mountain	25,969,000	25,860,000
California	32,652,000	31,772,000
Foreign	2,419,000	2,420,000
Total reported weekly	286,583,000	285,311,000
Estimate of unreported stocks	16,525,000	16,475,000
Total stocks	303,108,000	301,786,000

Standard Trailer Coupling

With use of tourist trailers increasing rapidly, the Society of Automotive Engineers plans appointment of a committee to set up a standard for the couplings by which the trailer is attached to the automobile. Trailers are likely to be drawn by any make of car and the time has arrived, engineers say, when a standard coupling design which will permit shifting the trailer from car to car is needed.

The sudden rise of the trailer is a major factor in the increased consumption of gasoline. Joe H. Thompson, travel expert of the Continental Oil Co., says it necessitates upward revision of tourist business estimates for 1936 and for future years. Last spring Mr. Thompson estimated $4,000,000,000 would be spent in 1936 by approximately 10,000,000 touring parties on trips averaging 3,500 miles.

"With orders to trailer manufacturers indicating a volume of 200,000 units a year, and with something over 250,000 trailers already on the road, on long if not permanent trips, we can safely add another $200,000,000 to the 1936 estimate," Mr. Thompson said.

Dr. H. P. Bybee, in charge of University of Texas lands, San Angelo, Tex., has a leave of absence from his work to assume charge of the department of geology for the University of Texas, Austin. Dr. Bybee will assume active charge of the land department work each summer but his place is to be taken at other times by Berte Haigh, member of the university lands geological staff for several years and former adjunct professor of geology at Texas School of Mines, El Paso.

Texas and Louisiana Gulf

FIND NEW LOUISIANA FIELD AND OTHERS ARE EXTENDED

By
F. L. SINGLETON

HOUSTON, Tex., Sept. 14.—Interesting developments along the Gulf Coast the past week included the confirmation of a new field in St. Mary Parish, Louisiana; discovery of commercial oil production in the Hughes gas field in Victoria County and completion of several important extension wells in older producing fields.

Mike Hogg and others No. 1 Laws Realty Co., located on the Charenton Prospect, St. Mary Parish, was washed in September 5 flowing at the rate of 21 bbls. of 37 gravity oil an hour through open 2-inch tubing, and after it had cleaned itself it was placed on a 20/64-inch choke and flowed at the rate of 450 bbls. a day, with tubing pressure 700 pounds. Production is from 10 feet of Miocene sand topped at 7,200 feet and bottomed at 7,210 feet.

The well opens the second field for the parish, being located on a block of approximately 30,000 acres about 3½ miles east of the Jeanerette field in section 30-13s-10e. It was drilled on the strength of reflection seismograph work done by the Petty Geophysical Engineering Co., which also recommended the location for the discovery well of the Jeanerette field. Like Jeanerette the existence of gas seeps and paraffin dirt beds in the area has attracted the attention of operators for years and the discovery well was the fourth test drilled, the deepest being abandoned below 8,500 feet.

Pipe Line to Be Laid

Terminal facilities are being constructed along the Bayou Teche River and a 4-inch line will be laid to the well, a distance of about 2½ miles.

Of particular importance in this area now is the wildcat being drilled on the South Jennings Prospect in Jefferson Davis Parish, where Stanolind Oil & Gas Co. No. 1 Calcasieu National Bank, is coring ahead below 9,400 feet after encountering a gas show in the drilling mud from 9,302-06 feet. A protection string of 9⅝-inch casing was cemented at 8,899 feet, and it is reported that the operators will try to drill to 10,000 feet before an attempt is made to test the possible oil sands indicated on an electrical coring test below 8,500 feet. The well is situated on a block of approximately 6,500 acres about 3 miles south of the town of Jennings in section 15-10s-3w.

Another important extension well is being tested at the Gillis field in Calcasieu Parish. It is Texas Co. No. 11 Nickerson, 1,000 feet west of production in section 11-9s-8w. Oil sand was cored from 6,713-18 feet and 7-inch casing was cemented at 6,712 feet. Several extensions have been marked up for the field within recent weeks that will call for many offsets.

While one deep wildcat was abandoned in this parish application for another was being made to the War Department for a test to be drilled in the southern part of the parish by Southern Sulphur Corp. The abandoned well was Union Sulphur Co. No. 1 Wurmost, quit at 9,259 feet. Location is southeast of Lake Charles in section 9-11s-8w.

Prospects of a deeper sand being opened at the Lafitte field in Jefferson Parish, which already holds the deepest producing record for the Gulf Coast, was being watched with interest as the Texas Co. was preparing to run an electrical coring test at No. 5 Lafitte, bottomed in sandy shale at 9,810 feet. Sand carrying an odor of oil was topped at 9,774 feet. Location is in section 20-17s-24e. The same company's No. 5 Rigolet in section 29 is coring in sandy shale below 9,875 feet. All the wells drilled to date are producing from depths of 9,400 to 9,600 feet.

Converted Into Oil Field

Along the Texas Coast, the Hughes gas field, Victoria County, discovered three weeks ago by Portilla Oil & Gas Co. No. 1 P. H. Welder, was converted into an oil field by completion of the same company's No. 2 P. H. Welder when it flowed 5 bbls. of pipe line oil an hour through a one-eighth inch choke with 400 pounds working pressure on the tubing and 1,400 pounds shut-in casing pressure. Sand, thought to be the Heterostegina, was cored from 4,846-57 feet, the total depth, and after 7-inch casing was cemented on bottom it was completed through perforated casing from 4,846-53 feet. No. 2 Welder is 933 feet north of the gas well, which is flowing from a depth of 4,279 feet. Both wells are in the Felipe Dimmitt Survey.

Preparations for a production test were being made by Harrison & Abercrombie on their No. 1 Armstrong plantation, about 4,000 feet northwest of production at the Old Ocean field in Brazoria County, which has attempted to blow out from a deep sand bottomed at 9,963 feet. Gas pressure, registered as high as 4,000 pounds, has been controlled and late in the week the hole was being reamed to set screen and liner. If the well is productive, indications are that it will be the same type of well as the company's two other producers which are making high-gravity oil from a depth of 8,600 feet.

Although it has not been confirmed by the operators, Texas-Crusader-Cockburn Oil Corp. No. 1 H. C. Cockburn, the discovery well of the Magnet Prospect, southern Wharton County, is reported to be showing salt water and may have to be worked over. The well is reported to be flowing about 4 bbls. of fluid an hour through a quarter-inch choke, with tubing pressure 350 pounds and casing pressure 150 pounds. Some reports say the well is making 26 per cent salt water. Owing to weighting material pumped into the hole under high-pressure, the well has had trouble in cleaning itself and it went dead for a short period, but now it is flowing into the pits under its own pressure. The hole is bottomed at 5,526 feet and it is producing through perforated casing from 5,552-61 feet. Location is in the J. Smith and H. McKenzie Survey.

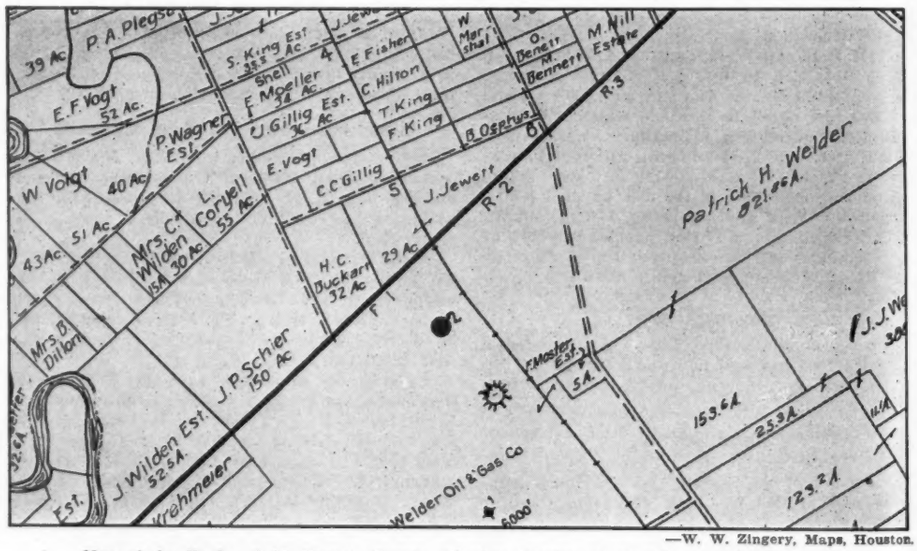
Faulted Structure Indicated

That a very faulted structural condition may exist at the recently discovered Cotton Lake field, Chambers County, is indicated by the abandonment of Glenn H. McCarthy Inc. No. 2 Kilgore, one location west of the discovery well. After failing to encounter the discovery horizon in the Marginulina sand, topped at around 6,300 feet, it was drilled to the Frio and was abandoned after an electrical coring test showed nothing of importance. The rig is being moved in for No. 3 Kilgore, an offset to Humble Oil & Refining Co. No. 1 Ben Dutton in the J. Townsend Survey.

To the northeast in the Anahuac field two important extension wells are to be tested. Sun Oil Co. No. 1 Myra White, 2,100 feet west of the nearest production topped the sand at 7,132 feet and is to be tested at 7,143 feet. Seven-inch casing was cemented at 7,120 feet. Although it is expected to make a producer, it is believed to be located near the edge of the structure. To the northeast, Humble Oil & Refining Co. No. 5-B White topped oil sand at 7,194 feet, and salt-water sand at 7,200 feet. The hole has been plugged back from 7,224 feet to 7,045 feet and 5½-inch casing has been cemented at 6,979 feet.

Sun Oil Co. No. 1 J. D. Hughes, the discovery well of the Greens Lake field, Galveston County, which was temporarily abandoned at a plugged-back depth of 3,620 feet and then sidetracked and redrilled to a depth of 3,636 feet, was completed for an initial production of 200 bbls. of oil a day through a quarter-inch choke, with tubing pressure and casing pressure 150 pounds.

Humble Oil & Refining Co. No. 1 Brown marked up an 1,800-foot northeast extension to the Hastings field when it came in flowing at the rate of 27 bbls. an hour through a quarter-inch choke with



—W. W. Zingery, Maps, Houston.

Map of the Hughes field, Victoria County, showing location of recently completed oil well in relation to the discovery well, which was completed for a gasser by the Portilla Oil Co.

tubing pressure 875 pounds and casing pressure 850 pounds. The hole is bottomed at 6,080 feet and was completed with 7-inch casing cemented at 5,986 feet. It is located in the W. H. Snyder Survey and the rig is being moved over for No. 2 Brown, 660 feet from No. 1.

Completion in Heyser Field

At the Heyser field, northwestern Calhoun County, Humble Oil & Refining Co. No. 3-A Welder topped a shallow sand at 4,860 feet and was completed at a depth of 4,876 feet for an initial production of 2 bbls. an hour through a 9/64-inch choke, with tubing pressure 800 pounds and casing pressure 1,650 pounds. It is situated 986 feet northwest of No. 2 Welder, which is producing from the discovery horizon at around 5,400 feet. The same company's No. 2-B Welder was completed through perforated casing from 5,487-94 feet and it flowed 11 bbls. an hour through a three-sixteenth inch choke, with tubing pressure 490 pounds and casing pressure 500 pounds. Locations for two more wells were made by the company. No. 3-B Welder is 933 feet southwest of No. 2-B in the A. Sisneros Survey, and No. 4-A Welder is situated on a 1,937-acre tract in the J. M. Rios Survey.

Continental Oil Co. is moving in material to the Citrus Grove Prospect, Matagorda County, for No. 2 Robbins, 1,300 feet from the south line and 530 feet from the east line of the J. C. Franz Survey. The location is 2,800 feet east of No. 1 Robbins, a dry hole.

Oklahoma Fields

(Continued from Page 66)

32-6s-4w, a wildcat in Jefferson County; Shell Petroleum Corp. No. 46 McClure, 870 feet south and 38 feet east of C section 5-4s-3w, Carter County, rigging up machine; Skelly Oil Co. No. 6 Moore, SW NE NW section 17-2s-2w, rig; Cox & Hamon No. 5 Davis, SE SW SE section 32-1n-3w, Garvin County, location.

Tulsa County

Johnson Oil & Refining Co. No. 3 Anthis, NW SE SE section 30-19-10, Tulsa County, was dry and abandoned in Bartlesville sand at 2,356-63 feet.

Okmulgee County

Completions in Okmulgee County included Cusack Oil Co. No. 3-A Johnson, SW NW SW section 20-12-12, 20 bbls. at 1,778-1,913 feet; Steighner and others No. 2 Colbert, SE NE NE section 14-14-14, 10 bbls. at 1,062-90 feet; Cusack Oil Co. No. 1 Scott, SE SW SE section 28-15-11, dry in Wilcox sand at 2,858-92 feet, and abandoned; Reliance Oil Co. No. 7 Cowan, CSL NE SW section 26-16-11, 30 bbls. at 1,851-81 feet; R. H. Ford No. 2 Noble, NW SE NE section 14-13-12, dry and abandoned at 2,102 feet; Hogue's No. 1-A Bisby, S half NE NE section 22-16-14, dry and abandoned at 1,763 feet.

Muskogee County

Riverland Oil Co. No. 1-A Flucher, SE NW SE section 16-14-17, Muskogee County, was dry and abandoned at 1,820 feet and J. R. Parks No. 1-A Grayson, SW NE NE section 13-14-16, was a hole full of water and abandoned at 1,835 feet.

Creek County

Big Four Petroleum Co. No. 5 Templin, SE cor. section 34-19-8, Creek County, was a 22-bbl. pumper at 2,632-55 feet. J. M. Scott No. 2 River bed, NW SW SE section 8-18-7, 30 bbls. at 2,420-2,504 feet. S. W. Anthony No. 2 Bruner, CNL NE NE section 4-16-12, Wilcox sand at 2,246-66 feet, flowed 800 bbls. in 24 hours. Sinclair Prairie Oil Co. No. 10 Gilcrease, C S half SW SE section 33-17-12, Wilcox sand at 2,232-41 feet, flowed 960 bbls. in 24 hours. A. Peppis and others No. 3 Kumrie, SW SW SW section 23-17-9, dry and abandoned at 1,300 feet. W. C. Sole No. 1 Penninghouse, NW SE NE section 3-17-9, plugged back to Prue sand at 1,980-2,005 feet, 5 bbls.

Indo Oil Co. was drilling at 1,815 feet in No. 1-A Sapulpa, SW NW NW section 33-18-11, Creek County, and had machine on the ground for No. 1-A Burgess, NW SW SW section 30-18-11. Klingensmith & Anthony were drilling at 430 feet in No. 1-A Gilcrease, SW SE SE section 33-17-12.

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East and East Central Texas

WATER IS ENCOUNTERED AT TALCO AND SULPHUR BLUFF

By L. E. BREDBERG

DALLAS, Tex., Sept. 14.—Water in the Talco pool and the second producer in the Sulphur Bluff pool, abandonment of the deep test in the Camp Hill pool, eastern Anderson County, and a large purchase in Rains and Wood Counties by Humble Oil & Refining Co., were the high lights in East Texas.

The second well completed in the Sulphur Bluff pool, Hopkins County, drilled by Hager and others on the J. E. Worsham lands, A. O. Wetmore Survey, has been showing salt water, various percentages being reported, and has been plugged back to shut off the water at 4,563 feet. This well ran 88 feet lower than the discovery, drilled by the same operators, about 1,000 feet northeast, but made a better well, coming in flowing whereas the first made only a pumper. However, sufficient sand was taken in the second well to insure plenty of room to plug back and still make a producer at least as good as the discovery.

Lack of water for drilling is holding up developments, Hager and others waiting on rains to fill up nearby creeks and ponds before they stake location for the third test.

The new water supply line into Talco has helped in boosting activities in that field in northwest Titus and northeast Franklin Counties. Three locations were staked on the Franklin side and six on the Titus side, making a total of 20 locations and rigs now standing with 27 tests drilling.

The Mrs. L. Stevenson producer has been making water from 4,296 feet after plugging back from 4,344 feet where it was first completed making three-fourths water or higher. When plugged back it made only a little more than 49 bbls. of fluid in 24 hours, 2 per cent salt water, the oil testing only 23.7 degrees. The sand was topped at 4,173 feet with elevation 341 feet.

Five wells were completed in the Talco field this week, one on the Franklin side, a 50-bbl. per hour well, flowing, one of the best completed to date. It is on the Lavado School lot in West Talco. The smallest well of the week was completed on the Simms lands in Titus by Pearl Goodwin. It made only 6 bbls. per day on the pump at total depth of 4,361 feet. The former well was bottomed at 4,303 feet.

All operators and companies drilling in the Talco field are now content to drill in the proven area, several failures having been chalked up around the edges. High cost of drilling the deep tests, with small recovery of low gravity oil, is not conducive to taking unnecessary chances.

Deep Failure

Gulf Oil Corp. has abandoned its Trinity sand test in the southern end of the Camp Hill pool in eastern Anderson County. No. 1 Ross (Delaney), in the Robert Irwin Survey, which formerly proved dry in the three sands from which various wells produce in the field, has also proved dry in the deeper horizons after running electrical well surveying instrument to test the lower Glen Rose, lower member of the Trinity at 8,283 feet. It will probably be plugged here. This test is across the county and to the southeast of Tide Water Oil Co. and Seaboard Oil Corp. No. 15-A Edens, in the Cayuga field in the northwest corner of the county, which has shown some distillate and gas, and is now preparing to cement 7-inch casing below these showings made on drill stem tests in the Glen Rose from 7,350-7,414 feet. Bottom of the hole is 7,570 feet. After the casing is set it will be perforated with gun at the various levels where the showings were made to make a producer of it, the method used in completing their Trinity sand discovery on the Wills lands about 3 miles northeast. This well was the first Trinity sand producer for the East Central Texas district.

J. M. Buchanan of Corsicana, has been awarded contract to drill a 6,000-foot test on the Etta Black 266-acre tract in the B. G. Balthorp Survey, Navarro County, by Calto Oil Co., headed by E. B. Germany of Dallas. The location is in the Bazette area and the company has 3,000 acres under lease.

Interesting Deal

Humble Oil & Refining Co. made an interesting deal with the Rio Oil Co., headed by R. D. Goodrich of Fort Worth, and E. DeGolyer of Dallas, this week, taking 2,500 acres in the Rio block in Rains and Wood Counties and paying a reported $100,000 and assuming a 7,500-foot drilling contract on lands in the R. Hotchkiss Survey, about 5 miles east of Emory in Rains County. This area has been tested to the Woodbine, proving dry in that horizon, and the deep test is to seek production in the Paluxy or Glen Rose, members of the Trinity. Tide Water Oil Co. and Seaboard Oil Corp. hold substantial interests in the area with other major companies getting in the play which is on a high extending from a point several miles southeast of Emory through Wood County into Hopkins County.

Velvet Oil Co. of Dallas is planning an interesting Woodbine wildcat test several miles southeast of Yancy and others' test on the Scott farm in the Awalt Survey, Freestone County, shooting the area to determine the location of the supposed high through the area. Another test is expected several miles southeast of the county seat, Fairfield, Paul Applin, consulting geologist of Fort Worth, and others now working on a drilling deal. Woodbine sand wildcats are now in the minority in this district, companies and independents planning deeper tests to the Trinity, especially along the fault line in the northern part of the district.

Only one other wildcat location was reported, Ginter and others having erected a derrick to drill a second test on lands of the Cope heirs in the J. Morin Survey, 3 miles east of Diboll in Angelina County for a Woodbine test.

The deep test drilling by Colton, Lester and others on the Baron Brothers lands, J. T. Taylor Survey, 8 miles northeast of Elmo in Kaufman County, has hit a tough fishing job within 32 feet of its contract depth of 6,000 feet and may have to be junked, skidding rig to drill another hole on the block.

A deep test is expected to be drilled in northern Fannin County where J. L. Joiner and H. L. Williford of Dallas are reported as taking 10,000 acres along Bois D'Arc Creek in the King, Williams, Pettit and adjacent surveys.

Another Deep Abandonment

Olson Drilling Co. and others have junked and abandoned their No. 1 Southwestern Life Insurance Co. test about 5 miles northwest of Denison in Grayson County, a rank wildcat near the Oklahoma line. Total depth was 5,774 feet, not far short of its contract goal, but junk in the hole caused it to be plugged back to 4,670 feet to side track tools and drill by, which was unsuccessful. It is in the C. Jamison Survey.

East Texas Field

In the East Texas field, there were 32 locations staked and 30 wells completed, three dry. New production totaled only 790 bbls. Five of the new wells were placed on the pump.

Anderson County

Tide Water Oil Co. and others No. 2 Goode, 4,022 feet, 127 bbls. in 24 hours through one-eighth inch choke.

Angelina County

Schaefer Co. No. 1 Phelps, dry and abandoned 2,075 feet; elevation 239 feet.

Franklin County

Dean and Atkinsson No. 1 Lavado School, 4,303 feet, 50 bbls. per hour, flowing.

Grayson County

Olson Drilling Co. No. 1 Southwestern Life Insurance Co., total depth 4,705 feet, plugged back to 4,670 feet, junked and abandoned. Elevation 767 feet.

Titus County

Pearl Goodwin No. 1 Simms, 4,361 feet, 6 bbls. per hour on pump. Jack Harold and others No. 1 L. J. Truitt, 4,343 feet, 200 bbls. per day on pump. Humble Oil & Refining Co. No. 1 Blackburn, 4,291 feet, 32 bbls. per hour. William White No. 1 Grey, 4,343 feet, 400 bbls. in 24 hours.

Van Zandt County

Pure Oil Co. No. 8 Blackstock, 2,915 feet, 54 bbls. per hour first 3 hours through eleven-sixteenths inch choke.

Gregg County

Arkansas Fuel Co. No. 6 Davis, 3,579-3,590 feet, 12 bbls. in 15 minutes. Atlantic Oil Producing Co. No. 10-A Satterwhite, 3,677-3,695 feet, 55 bbls. per hour. Humble Oil & Refining Co. No. 42 Hughes, 3,684-3,698 feet, 52 bbls. per hour. Humphrey No. 7 Branson, 3,589-92 feet, 20 bbls. per hour. Shell Petroleum Corp. No. 14 Aiken, 3,578-3,647 feet, 30 bbls. in 30 minutes. Stanolind Oil & Gas Co. No. 21-B Lathrop, 3,529-70 feet, 15 bbls. in 15 minutes; No. 10 Lee, 3,585-3,608 feet, 13 bbls. in 15 minutes.

Stanolind and others No. 25 Person, 3,494-3,552 feet, 20 bbls. in 15 minutes. Sun Oil Co. No. 15 Campbell, 3,523-34 feet, 20 bbls. in 45 minutes. Bradley and others No. 2 McNeely, 3,718-19 feet, 40 bbls. in 2 hours on pump. Gulf Oil Corp. No. 12 Crim, 3,628-41 feet, 20 bbls. in 17 minutes. Rajo Oil Corp. No. 14 McComic, 3,714-15 feet, 25 bbls. per hour. Texas-Canadian Oil Co. No. 1 Thomas, 3,708-09 feet, 40 bbls. per hour.

Rusk County

Gulf Oil Corp. No. 18 Sexton, 3,677-3,746 feet, 20 bbls. in 40 minutes. Humble Oil & Refining Co. No. 35-B Sexton, 3,660-3,710 feet, 20 bbls. per hour through eleven-sixteenths inch choke. Reed and others No. 3 Taylor, hole junked. Stanolind Oil & Gas Co. No. 7 Christian, 3,664-67 feet, 20 bbls. in 20 minutes. O. B. Stevens, Trustee No. 3 Warren, 3,771-72 feet, 30 bbls. in 30 minutes, W. J. Collins No. 1 Ashby, dry and abandoned, 3,730 feet. Ohio Oil Co. No. 14 Griffin, 3,612-89 feet, 20 bbls. per hour on pump; No. 18 Clay Heirs, 3,626-3,703 feet, 20 bbls. per hour on pump. Perot Oil Co. No. 7-B Sealsback, dry and abandoned, 3,622 feet.

Smith County

W. L. Session No. 14 Stone, 3,747-50 feet, 80 bbls. in 30 minutes. Sun Oil Co. No. 35-B Pace, 3,798-99 feet, 20 bbls. in 45 minutes. Trentman and others No. 4-A Moore, 3,828-29 feet, 45 bbls. in 30 minutes. G. C. Walters No. 1 M. M. Cross,

3,675-76 feet. 40 bbls. per hour. L. & G. Oil Co. No. 1 Cone-Williams, 3-710-12 feet, 25 bbls. in 30 minutes. Lyons & Neely No. 2 Morgan, 3,780-82 feet, 15 bbls. in 30 minutes, on pump. Stedham & Thrasher No. 7 O'Bryne, 3,765-3,774 feet, 20 bbls. per day, on pump. J. A. Wood No. 1-B Phillips, 3,675-77 feet, 25 bbls. in 30 minutes.

Louisiana-Arkansas Fields

(Continued from Page 71)

Johnson completion in the northeast of section 35-18-9. This company holds about 700 acres under lease in the Sibley area, and it may test the Travis Peak formation if oil accumulation is not found above.

ARKANSAS

Drilling in Arkansas is at a low stage, with only 10 rigs operating in the entire state. A few other wells have been temporarily abandoned for various reasons. The failure to develop commercial oil production from the deep Paleozoic testing at Show Hill discouraged activity here.

Eight geophysical crews continue their detailing in southern Arkansas. Lion Oil Refining Co. is sponsoring a crew in Cleburne County, in the north central portion of the state. Continental Oil Co. has its unit west of Starr City, Dallas County. Ohio Oil Co. is checking in Townships 18 and 19, Range 21w, Columbia County. An Amerada Petroleum Co. crew continues in Township 3, Range 3, Lee County. A Phillips Petroleum Co. party continues in Township 14, Range 20, Nevada County, and in the same county the Magnolia Petroleum Co. holds a crew in Township 13, Range 20. Federal Petroleum Corp. has a crew in Township 18, Range 12, Union County. Mid-Continent Petroleum Corp.'s newly installed unit in southern Arkansas is working in Union County, in the vicinity of Townships 18 and 19, Ranges 16 and 17.

Columbia County

It is reported that J. C. Buckbee and others are preparing location for the drilling of No. 1 Cumbie, section 17-17-18, to be a deep Paleozoic test of the region.

Miller County

Erwin & Leach are preparing for a 5,000-foot test at No. 1 Red River Farms, section 2-17-26, located 5 miles southwest of Garland City, on the southern fault of the Irma Graben.

Ouachita County

All attempts to find saturation and porosity at deeper points in the Permian lime at Snow Hill have been unsuccessful in Phillips Petroleum Co. No. 1 Arnold, NW NE SW section 27-15-15, northeastern flank of the Smackover field. Topping the big lime at about 4,915 feet, this well was drilled ahead to a depth of 5,708 feet to test the section thoroughly. Hard black lime was encountered during the last 100 feet of drilling, and salt water appeared from 5,630 to 5,708 feet. Operators now plan to pull the 7-inch casing and make an effort to complete as a gas well in the upper section of the Permian lime.

Four locations and two wells that had been drilled to the deep horizon without substantial showings were abandoned following the plugging back of No. 1 Arnold.

Lack of effective permeability, or previous loss of saturation through erosion or escape through upper migration in faults, have been given as reasons for the failure to find oil accumulation at Snow Hill.

Union County

After coring and drilling to a depth of 4,270 feet without encouraging showings, Phillips Petroleum Co. has abandoned its No. 1 Morgan, section 18-18-17. Here again, as in many other instances in southern Arkansas, the structure was apparent, but porosity or saturation was lacking.

EAST TEXAS (Border Counties)

Harrison-Panola

The assignment of a block of approximately 12,000 acres, situated on the Harrison-Panola County, Texas, line, centering around the town of Eylsian Fields, to the Lawler Petroleum Co. of Los Angeles, Calif., was announced, and a 6,000-foot test will be staked prior to October 20, 1936, according to terms of the sale. Geological work in this area has been done by Dr. A. F. Crider, of Shreveport.

Major companies continue to add to their holdings around the western flanks of the Waskom and Bethany structures, where important tests may be staked soon. Companies in evidence here include Magnolia, Sun, Shell, Devonian, Arkansas and Continental.

Panola County

The A. C. Glassell No. 1 Frost Lumber Co., important Glen Rose test on the Mary S. Potts Survey, 5 miles north of Carthage, reported a gas and oil showing from core taken at 4,872 to 4,910 feet, in the Oolitic limestone. The well is now standing for orders.

Shelby County

H. A. Stebbinger and others No. 1 Pickering Lumber Co., southwest corner of C. E. Henry Survey, was tested, with conflicting reports as to its actual gauge. The most conservative estimate was 5,000,000 feet of saturated gas, making about 20 bbls. of 50-gravity distillate a day. Production is coming from the Oolitic lime, corresponding to the Gloyd at Rodessa. Operators are installing a larger separator in preparation for another test. The Texas Railroad Commission has ordered that the well be shut in after testing until a market outlet can be found for the gas.

V. O. Harris, district petroleum engineer at Talco, Tex., for Humble Oil & Refining Co., has been transferred to the Gladewater district. East Texas. G. M. Chaffey, district engineer at Gladewater, has been transferred to Talco.

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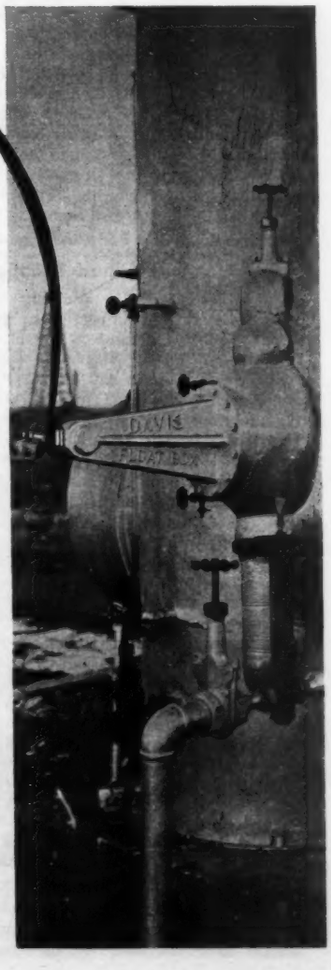

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West and North Texas

By
L. E. BREDBERG

WEST CRANE AND DAWSON COUNTIES HOLD ATTENTION

FORT WORTH, Tex., Sept. 14.—Dawson County's wildcat showing, with the proving of production in the lower lime, below sulfur water, in another Tubb field well in western Crane County, were the features in the West Texas district.

Gulf Oil Corp. No. 2 Tubb, NE quarter of section 12, Block B-27, in the Tubbs field, western Crane County, and offsetting to the west another producer, gave further indications there are deeper producing possibilities beneath the regular pay horizons found in the district. This well is shut in at 4,391 feet after acidizing, flowing 415 bbls. the first hour after it was acidized and shut in for some time. Before shutting down for test it made 224 bbls. the first two hours, gaining after the shutdown. Before acidizing it flowed 385 bbls. in seven hours. It is also making 5,687,000 feet of gas. This well is the eighth producer to produce below the sulfur water stratum, striking the first oil at 4,315 feet. It was acidized with 5,000 gallons. Rig has been skidded one location north for No. 3.

Dawson County Showing

Ray Albaugh, Fred Turner and others No. 1 John Robinson, section 46, Block M, E.L.&R.R. Survey, last week logging considerable oil from lime topped at 4,580 feet, with total depth 4,964½ feet, has been swabbing this week, making from 15 to 20 bbls. of oil when the swab was run in the hole six times. These runs lowered the fluid level 750 feet, 1,000 feet of fluid rising in 24 hours' time. The oil was reported testing 35 degrees. Five and three-sixteenths inch casing was set at 4,768 feet, and the water showing with the oil was reported as drilling water. It looks good for a small well as it stands and acid or shooting, or both, may develop it into a well of commercial proportions. It is about 20 miles northwest of Lamesa in the northwest corner of Dawson County. Elevation is 3,085 feet.

Yoakum Location

The second test in Yoakum County's first pool is to be started immediately by Texas Pacific Coal & Oil Co. in the NW cor. of section 678, John H. Gibson Survey, the same section as the discovery completed in April by C. J. (Red) Davidson of Fort Worth and Honolulu Oil Corp. on the Bennett lands, on acreage farmed out to Davidson by Texas Pacific Coal & Oil Co. That discovery was drilled to 5,278 feet but showed water and was plugged back to 5,264 feet to complete for an initial production of 234 bbls. It does not have a pipe line connection and has been producing on choke into storage tanks, opening the first producing area in the county. It was the first test drilled to the lime in a radius of 25 miles, but others have since been drilled to the lime in this and adjacent counties, so far with no success.

Twenty miles north, but in Cochran County, the discoverers of the Yoakum County well, Davidson and Honolulu, are drilling on the Duggan lands, in Labour 13, League 55, Oldham County School Lands. It topped the brown lime at 4,192 feet, or 490 feet subsea datum. Elevation is 3,693 feet. It is now around 4,300 feet in lime and anhydrite. Anhydrite was topped at 2,210 feet and salt top was logged at 2,405 feet, the Yates sand being picked up at 2,910 feet.

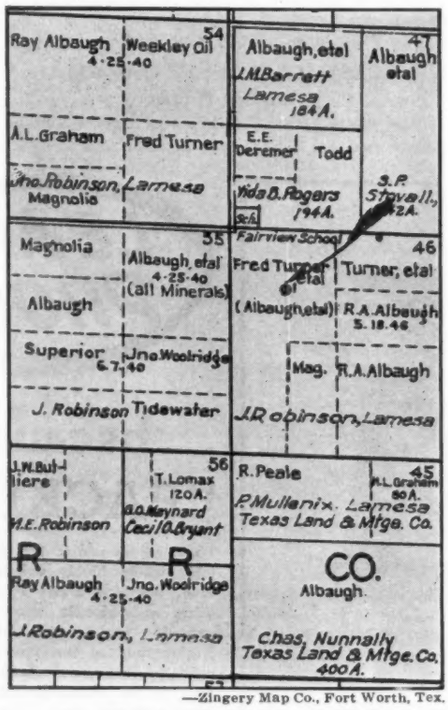
Probable Abandonment

Humble Oil & Refining Co. No. 1 E. H. Eubanks, section 6, Block AX, P.S.L. Survey, about 5 miles southwest of Seminole in Gaines County, and 6 miles northwest of the county's first well, will perhaps be given up at total depth of 6,192 feet where drill stem was shot in two. The hole was plugged back to 5,114 feet and tubing run to 5,090 feet with a packer set at 4,775 feet, showing but a slight amount of gas and only a little oil with drilling water at the beginning of a swabbing test. The lime may be acidized or a shot given.

Winkler Extension

Sinclair Prairie Oil Co., drilling in section 33, Block 74, on an old lease acquired in the Sinclair-Prairie merger, has extended the Henderson area north of the old Hendrick field in Winkler County another half mile west in drilling in No. 1-A Leck. It topped the pay at 3,070 feet, drilling 20 feet in and making 1,775 bbls. of oil in 24 hours. It is in the southeast corner of the section.

Reports state Humble Oil & Refining Co. has acquired assignments on a block of leases in the northeast part of Brewster County, comprising some 52,850 acres, and adjoining on the south the block on which Floyd C. Dodson is drilling a deep test in section 66, Block 10, G.H.&S.A. Survey. The Dodson test is shut down at 3,035 feet, but preparing to drill.



—Zingery Map Co., Fort Worth, Tex.

Ray Albaugh and others No. 1 John Robinson, wildcat, in section 46, Block M., E.L.&R.R. Survey, in the northwest quarter of Dawson County, which has been bailing some oil at a total depth of 4,945 feet

North Texas District

Target Drilling Co. No. 1 Van Slyke, W. C. Brown Survey, about a mile northwest of production in the Anderson and Kerr pool, 2 miles east of Gainesville in Cooke County, has defined the northwest limits of that pool being dry and abandoned at 2,505 feet. Another well, on the south of the pool about one-half mile, appears as an extension and has set casing preparatory to testing. Reed and others are drilling this test on the Randall lands in the J. N. Redman Survey. It had a showing of oil from 2,507-17 feet and set 7-inch casing at 2,517 feet.

McCary and others are preparing to drill on the A. P. Orsburn tract, A. C. C. Bailey Survey, 1½ miles northeast of production.

Three other wildcat locations were staked, one each in Jones County, McCulloch and Pecos County. L. H. Pearson is to drill the Jones County test on the Guitar Estate lands, in section 23, Block 14, T.&P. Survey. The McCulloch test is already drilling around 1,725 feet, and the Pecos County test is the Trans-Pecos Oil Co. No. 2 Caldwell, section 27, Block 50, Township 9, T.&P. Survey, spudded and shut down to complete rigging up.

T. D. Humphrey No. 1 W. F. Rushing, section 11, G. Martinez Survey, 1 mile north of Hawley in Jones County, is due for abandonment after striking a hole full of water this week and shutting down at 2,670 feet. It has passed up all sands producing in the Hawley field, to the west. Contract depth was 2,600 feet.

New Wildcat

Maracaibo Oil Exploration Corp., of which Ernest L. Wilson of Dallas is vice president, is to drill an extreme wildcat test on a geophysical high on the south line of Terry County and about 11 miles northwest of the Dawson County test. Some 5,200 acres in a block have been turned to the company which is to be assisted by a couple of independents in drilling. Location is on the J. B. Lewright lands in section 1, Block C-37, P.S.L. Survey.

Wildcat

W. A. Box and J. M. Seaberry have staked location for a wildcat about 1½ miles south of Wichita Falls on the Krizon lands, in Block 43, Cherokee County School Lands Survey. It will go to 850 feet, and is in Wichita County.

Sinclair Prairie Oil Co. No. 2 Holt, in Block 45, Kaufman County School Lands Survey, 6 miles northeast of Nocona in Montague County, which is drilling for deep production around 3,000 feet, has been bailing around 25 bbls. of oil per day from sands found at 1,693-1,703 feet and may plug back later to produce here if it fails to pick up deeper production, as No. 1 test did. That test was drilled below 3,000 feet, but also failed to make a producer from the shallower saturated horizons.

A deep Archer County test is to be drilled by Clark and Mayfield on the W. H. Taylor lands, in section 17, A.T.N.C.L. Survey, about 2½ miles northwest of a deep dry hole in the old Gose pool. Contract depth is 2,250 feet, or the Canyon lime.

Another deep wildcat is rigging up preparing to spud. W. L. Halbert and others are to drill this test on the W. S. Petty lands in the S. A. Southerlin Survey, in Montague County.

WEST TEXAS COMPLETIONS

Concho County

J. W. Westbrook No. 1 Ledbetter, dry and abandoned, 3,502 feet; elevation 2,000 feet.

Edwards County

H. Adams No. 1 Holmes, temporarily abandoned 560 feet; elevation 2,247 feet.

Crane County

R. H. Henderson and others No. 1-A Cordova

Union, 1,982-2,139 feet, acidized, 651 bbls. on pump.

S. Currie and others No. 1 Kloh, 3,320 feet, total depth 3,650 feet, plugged back to 3,505 feet, 290 bbls. through three-eighths inch choke.

Ector County

Stanolind Oil & Gas Co. No. 35 Cowden, 4,095-4,300 feet, 615 bbls. Gulf Oil Corp. No. 9-B Connell, 3,500-3,700 feet, shot, 654 bbls. Wm. Dunning, Jr., No. 1 Scharbauer, total depth 4,240 feet, acidized, 681 bbls. F. Turner No. 1 Blakeney, 4,040-4,303 feet, shot, 90 bbls.

Gulf Oil Corp. No. 3 Goldsmith, 4,153 feet, 784 bbls. in three and one-quarter hours. Grisham & Hunter and others No. 2 Cowden, dry and abandoned 4,760 feet; elevation 3,318 feet.

Fisher County

General Crude Oil Co. No. 8 Flannigan, 3,847 feet, plugged back to 3,125 feet, acidized, 50 bbls.

Howard County

Shasta Oil Co. No. 8 Dodge, 2,495-2,741 feet, shot, 888 bbls.

Magnolia Petroleum No. 6 Kelly chalk, 2,925-3,052 feet; shot, 5 bbls. first hour. Continental Oil Co. No. 1-G Clay, total depth 1,898 feet, 15 bbls.; No. 11 Overton, 2,459 feet, acidized, 909 bbls.; No. 11-S Settles, 1,222-62 feet, 6 bbls. per hour for nine hours.

Sam Goldman No. 2 Denman, 2,575-2,815 feet, shot, 10 bbls. per hour on swab. Shasta Oil Co. No. 7 Dodge, 2,455-2,775 feet, shot, 496 bbls. Herschback Petroleum Corp. No. 4-A Davis, 2,517-2,856 feet, shot, 516 bbls. swabbing and flowing.

Jones County

Sandy Ridge Oil Co. No. 6 Jones, 1,935-1,973 feet, plugged back to 1,956 feet, shot, 102 bbls.

Dobbs Oil Co. and others No. 1 McCreight, dry and abandoned 2,602 feet; elevation 1,640 feet. H. O. Wooten No. 1 A. O. Poindexter, dry and abandoned 2,701 feet. Owens & Snebold No. 1 Jones, dry and abandoned 2,603 feet.

Pecos County

Cardinal Oil Co. No. 1-E Smith, dry and abandoned 1,484 feet. Ohio Oil Co. No. 15-G Yates, 1,162-1,315 feet, 44 bbls. per hour.

Kone Production Co. No. 4 Pecos Valley, total depth 1,652 feet, 22 bbls. P. Childress Trustee No. 8 Smith, 342-358 feet, 185 bbls.

Runnels County

Golden Petroleum Co. and others No. 1 Giesecke, dry and abandoned 2,792 feet; elevation, 1,635 feet.

Taylor County

R. A. Forester No. 1 O. A. Prescher, dry and abandoned 2,432 feet.

Upton County

Alma Oil Co. No. 1 Powell, dry and abandoned 2,705 feet, shot; elevation 3,080 feet. Duffey and others No. 7 McClintock, 2,860-3,030 feet, shot, 464 bbls. Kirk & Whiteside No. 3 Lane, dry and abandoned, 2,342 feet. Hightower Oil & Refining Co. No. 1 Burleson, 2,174-2,206 feet, acidized, 293 bbls. on pump. Humble Oil & Refining Co. No. 17 Ricks, total depth 2,150 feet, 160 bbls. on pump. Texas and Pacific Coal & Oil Co. No. 4 Reese, 2,580-2,601 feet, acidized, 295 bbls. Shell Petroleum Corp. No. 30 Bowen, 2,162-76 feet, acidized, 564 bbls., 2 per cent water; No. 31 Bowen, 2,100-51 feet, acidized, 501 bbls., 1.7 per cent b.s.

Anderson and others No. 1 Lane, dry and abandoned 2,232 feet. Eppenaur Drilling Co. No. 3 Lane, 1,995-2,068 feet, acidized, 889 bbls. J. Peery No. 2 Sherk, 2,175-2,248 feet, acidized, 998 bbls. Anderson Oil Co., Inc., No. 1-A Burleson, dry and abandoned 2,313 feet. Smith & Cravens No. 3 Reese, 2,170-80 feet, acidized, 1,185 bbls. Gulf Oil Corp. No. 136 McElroy, 2,675-2,878 feet, 1,640 bbls. oil and 62 bbls. water. J. E. Lucas No. 1 Cordova Union, dry and abandoned 2,445 feet; elevation 2,706 feet.

Ward County

Stanolind Oil & Gas Co. No. 4 Martin, 2,467-2,524 feet, shot, 35 bbls. Empire Gas & Fuel Co. No. 6 McDonald, 2,356-2,484 feet, shot, 709 bbls. Reno Oil Co. No. 3 Beatty, 2,365-2,510 feet, shot, 2,496 bbls. Richardson Oils, Inc., No. 3 Hathaway, 2,417-2,580 feet, shot, 3,612 bbls. in 6 hours; No. 4 Hathaway, 2,485-2,610 feet, shot, 3,561 bbls.

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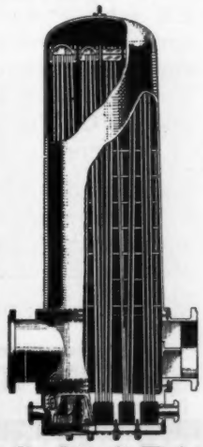

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Tex Mex Petroleum Co. No. 6 Pure-Smith, 2,355-2,472 feet, shot, 127 bbls. Empire Gas & Fuel Co. No. 5 McDonald, 2,260-2,500 feet, shot, 740 bbls.; No. 7 McDonald, 2,252-2,500 feet, shot, 483 bbls. Atlantic Oil Producing Co. No. 5 Black Camp, 2,370-2,600 feet, shot, 314 bbls. F.H.E. Oil Co. No. 4-C Richter, 2,492-2,575 feet, shot, 2,212 bbls.

The California Co. No. 32 Gordon, 2,312-2,505 feet, shot, 562 bbls.; No. 34 Gordon, 2,265-2,324 feet, shot, 211 bbls. W. J. Dobbs No. 1-B Bray, 2,558-67 feet, shot, 65 bbls. A. Hargraves and others No. 1 Skelly, dry and abandoned 3,015 feet, elevation 2,603 feet. Sinclair Prairie Oil Co. No. 2-A Carnagie, 2,229-2,340 feet, shot, 253 bbls.

Winkler County

Monday Oil Co. No. 2 Central State Bank of Abilene, 2,769-2,982 feet, shot, 1,115 bbls. Mid-Continent Petroleum Corp. No. 5 Walton, 2,810-2,960 feet, shot, 1,012 bbls. Tide Water Oil Co. No. 11 Walton, 2,735-2,925 feet, shot, 470 bbls. Atlantic Oil Producing Co. and others No. 2-A Leck, 3,015-80 feet, shot, 2,511 bbls.; No. 3-A Leck, 3,015-85 feet, 1,723 bbls. Magnolia Petroleum Co. No. 28 Walton, 2,835-2,935 feet, shot, 515 bbls. Sayre Oil Co. No. 7 Daugherty, 2,785-2,990 feet, shot, 916 bbls.; Amerada Petroleum Corp. No. 2-A Daugherty, 2,897-3,032 feet, shot, 474 bbls. Richardson Oils, Inc., No. 1 Cosden-Scarborough, 2,854-3,000 feet, shot, 727 bbls. Gulf Oil Corp. No. 4 Clapp, 3,136 feet, shot, 248 bbls.

Humble Oil & Refining Co. No. 5-A Colby, 2,840-3,106 feet, shot, 788 bbls; No. 3 Howe, 2,798-2,990 feet, shot, 961 bbls. Tide Water Oil Co. No. 12 Walton, 2,830-2,945 feet, shot, 675 bbls.; No. 10 Walton, 2,725-2,916 feet, shot, 707 bbls. Mid-Continent Petroleum Corp. No. 3-A Walton, 2,814-2,974 feet, shot, 1,098 bbls. Illinois Oil Co. No. 2-A McCutcheon, 2,868-2,975 feet, shot, 862 bbls.; No. 1-B Scarborough, 3,015-3,103 feet, shot, 246 bbls. Magnolia Petroleum Co. No. 30 Walton, 2,809-2,931 feet, shot, 823 bbls; No. 31 Walton, 2,797-2,930 feet, shot, 1,294 bbls. Sinclair Prairie Oil Co. No. 7-B Cummins, 2,800-3,019 feet, shot, 450 bbls. Sayre Oil Co. No. 3-C Howe, 2,882-2,902 feet, shot, 1,008 bbls. Falcon Oil Co. No. 4 McCutcheon, 3,210-3,601 feet, shot, 165 bbls.

NORTH TEXAS COMPLETIONS

Archer County

C. B. Bailey and others No. 1 G. Parrish, 1,553 feet, dry. L. T. Burns No. 3 J. J. Perkins C, 1,623-25 feet, 10 bbls. Cable Oil Co. No. 12 C. Webb, 706-12½ feet, 2 bbls. Consolidated Oil Co. No. 3 W. H. Portwood CC, 1,431-40 feet, 350 bbls.; No. 3 Portwood DD, 1,429-37½ feet, 40 bbls.

Continental Oil Co. No. 1 B. C. Andrews, 1,058 feet, dry; No. 56 S. M. Gose, 1,611-17 feet, 56 bbls. Deaton & Gose No. 3 H. Hawkins, 534 feet, dry. Fraser & Proctor No. 1 Langford, 2,298 feet, dry.

B. H. Hilburn No. 1 L. F. Wilson, 1,607 feet, dry. W. B. Omohundro No. 1 C. L. Abercrombie and others, 1,924 feet, dry. Wilson & Russell No. 18 R. O. Prideaux, 667-90 feet. 10 bbls.

L. T. Burns No. 14 Albers A, 1,214-36 feet, 25 bbls.; No. 1 Mrs. M. E. Durham, 1,544 feet, dry; No. 1 W. H. Taylor, 1,603-10 feet, 12 bbls.; No. 2 C. C. Conner, 1,382 feet, dry; No. 13 A. F. Ickert, 1,207 feet, dry.

Burns & Long No. 20 Turbeville Tidal, 1,502-08 feet, 25 bbls. Consolidated & Primrose No. 5 L. F. Wilson, 2,228-37 feet, 200 bbls. Consolidated Oil Co. No. 7 W. H. Portwood, cored 1,460 feet, dry; No. 9 W. H. Portwood, cored 1,450 feet,dry.

Continental Oil Co. No. 1 J. S. Melugin, 1,305 feet, dry. R. O. Harvey Jr. No. 1 Dr. A. B. Edwards, 1,278-1,309 feet, 10 bbls. M. A. Kessler and others No. 1 W. R. Ball Jr., 750 feet, dry. Lindsay Drilling Co. No. 4 L. F. Wilson, 2,210-18 feet, 250 bbls. Regal Oil Co. No. 3 L. F. Wilson B, 913 feet, dry.

Baylor County

Consolidated Oil Co. No. 6 W. H. Portwood S, 1,420-26 feet, 70 bbls. Petroleum Produrers Co. No. 32 W. H. Portwood, 1,431 feet, dry.

Consolidated Oil Co. No. 5 W. H. Portwood S, 1,414-20 feet, 20 bbls.; No. 2 W. H. Portwood Y, 1,450 feet, dry.

Clay County

Carl Pursel No. 3 Stine D, 2,436 feet, dry. Metzner & Burns No. 5 J. J. Taylor, 362 feet, dry.

Cooke County

Jas. L. Anderson and others No. 2 F. A. Bruhlmeyer, 2,072-93 feet, 265 bbls. Anderson & Kerr No. 3 L. K. Bell, 1,938-57 feet, 375 bbls.; No. 1 Millie Hill, 1,950-2,021 feet, 775 bbls; No. 2 R. S. Rose, 1,944-61 feet, 580 bbls; No. 2 A. Wilson, 2,043 feet, dry.

Harrison & Dillard, Inc., No. 8 R. W. Trew, 1,213-30 feet, 65 bbls. Homarado Oil Co. No. 1 H. D. Field, temporarily abandoned location. Keil & Keil No. 1 C. M. Martin, 1,002-16 feet, 20 bbls. A. N. Landes No. 1 Mrs. O. Wilson, 961 feet, dry. F. W. Merrick, Inc., No. 2 J. W. Muerer, 726-60 feet, 4 bbls; G. A. Stelzer, 774-810 feet, 4 bbls. Panhandle Refining Co. No. 1 S. S. Jones, 2,196 feet, dry. Seitz Comegys & Seitz No. 1 E. G. Ramsey, 1,603 feet, dry. J. C. Shaffer No. 2 L. M. Curry, 2,066-83 feet, 500 bbls.

J. L. Anderson and others No. 2 T. C. Delisle, 2,058-76 feet, 550 bbls. Anderson & Kerr No. 4 L. K. Bell, 1,922-33 feet, 600 bbls.; No. 1 R. S. Rose, 1,939-44 feet, 525 bbls. J. DeGrazier No. 1 E. P. Bell, 1,932-41 feet, 520 bbls. C. C. Harwell & Co. No. 1 H. G. Proffer, 2,165 feet, dry.

Hester Oil Co. No. 5 R. W. Trew, 1,109-15 feet, 50 bbls. W. M. Johnson No. 1 G. M. Smith, 200 feet, dry. Kewanee Oil & Gas Co. No. 11 Hyman, B, 1,170-1,427 feet, 100 bbls. F. W. Merrick, Inc., No. 11 G. A. Stelzer, 773-80 feet, 5 bbls. Mullens & Weil No. 1 R. S. Rose, 1,936-42 feet, 520 bbls.

Tom C. Patton No. 3 Bell, 1,935-47 feet, 550 bbls. Lee Portman No. 1 T. C. Delisle, 2,080-98 feet, 750 bbls. Rapp and others No. 1 F. A. Bruhlmeyer, 2,062-73 feet, 550 bbls. J. C. Shaffer No. 1 Lula M. Curry, 2,075-82 feet, 435 bbls.; No. 2 Ed Wilson Estate, 2,385 feet, dry.

Texas Co. No. 11 Walterscheid, 815 feet, dry. Ungerman and others No. 1 Reed, 2,130 feet, dry. Whitfield and others No. 2 Rose, 1,933-47 feet, 750 bbls.

Denton County

C. S. Hoad No. 1 Atkins, 1,706 feet, dry.

Grayson County

Olson Brothers Drilling Co. No. 1 S.W. Life Insurance Co., 5,890 feet, dry. Port Bolivar No. 1 Creed Taylor, 4,250 feet, dry.

Jack County

Bloodworth and others No. 2 Stockyard National Bank, 420 feet, dry. Buttram Petroleum Co. No. 5 C. K. Cullers, 2,096 feet, dry. R. D. Compton No. 6 Henderson, 400 feet, dry; No. 7 Henderson, 315-30 feet, 5 bbls. G. N. Gillispie No. 1 Nora Kee B, 2,984-3,033 feet, 50 bbls. Gwynn & Overbey No. 3 B. F. Rankin, 2,967-90 feet, 275 bbls. Hamilton Petroleum Co. No. 1 E. H. Rhodes, 2,370-87 feet, 265 bbls. Sterntex Oil Co. No. 1 Boyd, 3,382 feet, temporarily abandoned; No. 1 Lindsey, 1,204 feet, temporarily abandoned.

Compton Oil Co. No. 3 Loving, 317-44 feet, 5 bbls. Gwynn and others No. 2 Rankin, 2,981-3,005 feet, 400 bbls. Mullendore & Berry No. 1 E. W. Chambers, 2,940-42 feet, 528 bbls. J. S. Yell No. 3 W. H. Peterson, 347 feet, dry.

Montague County

Lesh & McCall No. 7 Cunningham A, 900-50 feet, 31 bbls. Sinclair Prairie and others No. 1 C. Holt, 3,648 feet, dry. Texas Co. No. 4 H. S. Henley, 1,139-1,200 feet, 13 bbls.

Arco Oil Co. No. 2 Mrs. M. H. Salmon D, 1,166½-85 feet, 40 bbls. Bridwell Oil Co. No. 7 J. S. Dennis, 1,671-87 feet, 40 bbls. FHE Oil Co. No. 1 Crownover, 1,287 feet, dry. T. Minnich No. 1 Mrs. F. E. Loy and others, 893-907 feet, 20 bbls. Perkins & Cullum No. 4 J. W. Rowland, 1,411 feet, dry. Texas Co. No. 2 J. E. Lemon, 800-15 feet, 1,500,000 feet of gas.

Wichita County

Continental Oil Co. No. 3 Waggoner Brothers, 1,301-18 feet, 120 bbls. E. H. Croan and others No. 1 C. P. Van Loh, 565 feet, dry. H. G. Mitchell and others No. 1 W. W. Overbey, 1,248 feet, dry. Perkins & Cullum No. 14 Burnett, 1,930 feet, dry.

Hugh Jones No. 10 Mrs. J. Rexford, 1,210 feet,

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A-305

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dry. Tom Medders No. 1 J. L. Jackson, 1,620 feet, dry. Holbrook & Wood No. 2 Kemp, 2,010 feet, dry. Floyd Pace No. 10 Foster & Allen, 467-74 feet, 6 bbls. Perkins & Cullum No. 17 T. L. Burnett and others, 1,337-57 feet, 20 bbls. Peterson & McCarty No. 36 E. E. Hardin, total depth 373 feet, water input well; No. 37 E. E. Hardin, total depth 569 feet, water input well; No. 38 E. E. Hardin, total depth 365 feet, water input well. Brashear Drilling Co. No. 1 Waggoner, 1,946-81 feet, 50 bbls.

Wilbarger County

King Oil Co. No. 5 Waggoner N, 1,571 feet, dry.

Young County

L. T. Burns No. 3 Rushing, 897-907 feet, 35 bbls. Cato Oil Co. No. 12 Hamilton, 879-907 feet, 50 bbls. W. F. Collins No. 1 Barnett, 560 feet, dry; No. 1 H. Koester, 1,041-65 feet, 3 bbls. Continental Oil Co. No. 11 R. Campbell B, 966 feet, dry. B. C. Gilmore No. 2 Josie Williams, 606 feet, dry.

Gorsuch Oil Co. No. 23 O. W. Mathews, 753 feet, dry. O. and S. L. Hudgeons No. 1 Farrow A, 1,000 feet, dry. Petroleum Producers Co. No. 6 Clara E. Luton, 651-70 feet, 20 bbls. Rathke Oil Co. No. 2 Rogers, 4,086-4,138 feet, 12 bbls. Sams & Myers No. 1 C. J. Taack, 754 feet, dry. Solo Oil Co. No. 11 O. B. Stowe, 1,062-68 feet, 10 bbls.. Wichita Production Co. No. 14 Keith, 750 feet, dry.

Archer Drilling Co. No. 4 Edwards, 1,233 feet, dry. Beavers Cox and others No. 1 W. F. Hoffman, 615 feet, dry. Bohner & Watson No. 5 Prido, 504-17½ feet, 5 bbls. Bohner and others No. 8 E. R. Prido, 525 feet, dry. F. E. Butler and others No. 1 A. A. Barnhardt, 1,042 feet, dry. W. F. Collins No. 1 Robert Bullock, 716 feet, dry.

Cunningham & McDonald No. 9 C. W. Johnson, 504-25 feet, 3 bbls. Falls Production Co. No. 1 J. W. Seddon, 4,570 feet, junked. Glover and others No. 20 Johnson, 541 feet, dry. N. D. Goldsmith No. 3 Annie Beardon, 1,099 feet, dry. L. G. Hawkins No. 13 J. M. Kirkland, 737 feet, dry. O. & S. L. Hudgeons No. 1 Jones, 586 feet, dry. Jack Latson No. 1 B. F. Barrett, 570-77½ feet, 10 bbls.

Jack Latson No. 2 B. F. Barrett, 569-76 feet, 15 bbls. Lenington and others No. 1 Fee, dry and abandoned, 570 feet. Lion Oil & Refining Co. No. 1 S. L. Scott, 749-51 feet, 20 bbls. J. E. McDonald No. 4 Jeffery, 819-25 feet, 50 bbls. Panhandle Refining Co. No. 3 Nellie Prideaux, 728-32½ feet, 85 bbls. E. R. Perkins No. 2 Clarida, 599 feet, dry. Tebay & Leberman No. 2 Hawkins, 1,408 feet, dry. West & Honea No. 1 W. W. Johnson, 925 feet, dry; No. 1 Elsie Turner, 850-61 feet, 45 bbls.

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Rocky Mountain Fields

(Continued from Page 77)

Petroleum County

Homestake Oil Co. No. 24-A Govt., C NW sec. 10-15n-29e. Drlg. 1,550 ft.; second Cat Creek dry.
H. C. Rowland No. 1 Kalispel, NE NE SE sec. 35-14n-25e. Drlg. 215 ft.

Judith Basin County

Fletcher E. Hunt No. 3, NW SE NE sec. 20-14n-15w. S.D. 1,300 ft.; prep. to run 6¼-in. for W.S.O.

Pondera County

Clinch Pet., Ltd., No. 1 Hollan, NW SW NW sec. 12-23-6w. S.D. 2,300 ft.
Gordon Campbell No. 1 Hughes, NW NE NW sec. 12-30n-4w. Drlg. 2,350 ft.
Jones-Chambers No. 1 Erickson, SW SE SW sec. 3-27-4w. Bldg. drk.

Sheridan County

Cheyenne O. & G. Co. No. 1 Olson, SE SE SE sec. 14-35n-53e. Drlg. 1,460 ft.

Toole County

Stanley Gray No. 3 Government, NW NW SW section 12-35n-3w, which opens up about a square mile of territory on the west side of the Kevin-Sunburst field for development, pumped 160 bbls. the first 24 hours from the Sunburst sand at 1,502-55 feet. He has a block of 2,000 acres.

Cook & Eddy No. 2 Haskins, SE SW SW section 25-36n-2w, has 1,000 feet of oil in the hole in the Sunburst at 1,553-93 feet and is a completion. It is estimated at 100 bbls.

There were three first reports.

A. Beardslee No. 4 Swears, sec. 9-35n-2w. T.D. 1,617 ft.; 700 ft. of fluid; will acid.; Ellis-Madison 1,673 ft.
Alexander-Sorrell No. 1 Strange, NE SE SE sec. 31-35n-3w. T.D. 1,480 ft.; Sunburst at 1,460 ft.
Boru Oil Co. No. 1 Reynolds, SW NE SW sec. 31-33n-4w. T.D. 1,435 ft.; reblt. rig.; R.U.
Big West Oil Co. No. 3 Dalquist, SE NE NW sec. 21-35n-3w. Drlg. 1,400 ft.
Clara Oil Co. No. 9 Waite, SE SE NE sec. 24-35n-2w. R.U. (first report).
Coolidge & Coolidge No. 3 Shaw, SE SE NE sec. 35-36n-2w. Drlg. 900 ft. (first report).
Coolidge & Coolidge No. 1 Badger Oil Co., NW SW NW sec. 31-36n-1w. Spd. and S.D.
Deloraine Oil Co. No. 4 Govt., NW SW NE sec. 28-33n-1w. T.D. 1,385 ft.; 180 ft. oil in stray sd. at 1,340-80 ft.; will shoot.
Frazier & Smith No. 1 Van Note, CWL SW NW sec. 30-35n-2w. Drlg. 250 ft.
T. P. Kyle No. 1 Wolnsti, CSL SE SE sec. 3-37n-1w. S.D. 2,615 ft.
Mahill Oil Co. No. 1 Van Note, NW NW SW sec. 30-35n-2w. T.D. 1,531 ft.; Ellis-Madison 1,527 ft.; S.O.; will acid.
Munger No. 1 Peterson, NW NW SW sec.8-35n-2w. Drlg. 500 ft.
No Jack Oil Co. No. 1 Lashbaugh, NE SW NW sec. 34-35n-2w. Spdg. 60 ft.
Superior Oil Co. No. 4 Halter, CEL NW NE sec. 21-35n-2w. R.U. (first report).
C. Leonard Smith No. 1 Graves-Hines, SW SE sec. 20-33n-2e. Drlg. 640 ft. in Colo.
Rimrock Oil Co. No. 1 Schmidt, C SE NW sec. 29-35n-3w. T.D. 1,776 ft.; Ellis-Madison 1,760 ft.; pumped 20 bbls. daily; will acid. again with 5,000 gals.

Yellowstone County

R. C. Tarrant No. 1 Mosser, CWL SW NE section 26-3s-24e, a wildcat in the Mosser district, southern Montana, had the Greybull sand at 995-1,060 feet. It had a show of oil at 1,008 feet, the oil rising 460 feet. It swabbed 100 bbls. Hole then drilled deeper and encountered a flow of water at 1,015 feet. It could not cement off and is drilling ahead at 1,115 feet. It had gas in the upper Greybull and 2,000,000 feet in the Muddy.

NEBRASKA

Dawes County

Stephens Oil Corp. No. 1 Palmer, C NW SW sec. 1-33n-50w. Cmtd. 12½-in. at 1,300 ft.; drlg. plug.

Red Willow County

C. W. Kelly et al No. 1 Bower, SE NW SE sec. 2-2n-29w. S.D. 1,450 ft.

Sioux County

J. M. Huber Corp. and United Producers, Inc., et al No. 1 Morgan, C SW SW sec. 32-35n-56w. Drlg. 967 ft.

Franklin County

Wm. Steinlee No. 1, SE NE SE sec. 25-1n-15w. Loc. (first report).

Grant County

Byrd-Frost, Inc., and Magnolia Pet. Co. No. 1, NE NE NW sec. 11-24n-38w. Artesian wtr. at 400 ft.; drlg. 526 ft.

UTAH

Daggett County

Mountain Fuel Supply Co. No. 1 State, NW NE SW sec. 16-3n-24e. Drlg. 5,265 ft.

Emery County

California Co. No. 1 Palm Unit, C SW SW sec. 22-23s-11e. Drlg. 1,116 ft.

Grand County

Columbia Crude Corp. No. 1 Rath, NW SW SE sec. 12-25s-20e. Drlg. 1,418 ft. in 10-in. hole.
Utah Southern Oil Co. No. 1 Hyde, SE NW NW sec. 33-22s-22e. Resuming at 4,880 ft.; to go 1,500 ft. deeper following seismograph survey.

Utah County

Diamond Oil Co. No. 4 Govt., CSL SE NW sec. 16-8s-5e. T.D. 3,990 ft.; fsg. bit.

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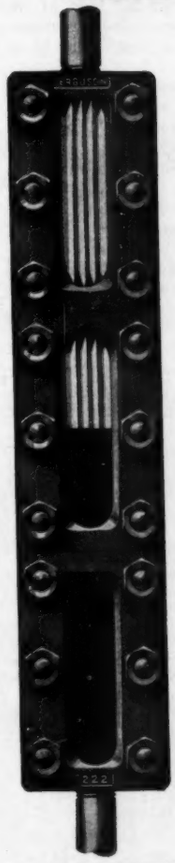

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Southwest Texas District

By
GEORGE WEBER

SHELL OPENS NEW FIELD IN RIO GRANDE VALLEY REGION

SAN ANTONIO, Tex., Sept. 14.—Discovery of a new oil field in the Rio Grande Valley district with completion of Shell Petroleum Corp. No. 1 Yturria Land & Livestock Co., located in the northwestern part of Willacy County, was the outstanding development in Southwest Texas the past week. Bottomed in the deepest producing sand found in the entire district, the well was washed in through perforated liner from 7,651-20 feet, and it flowed at the rate of 232 bbls. of 58-gravity oil a day through a quarter-inch choke, with tubing pressure 2,200 pounds and casing pressure 2,400 pounds.

The well is situated on a geophysical prospect of about 16,000 acres, 6 miles west of Raymondville in share 64 of the San Juan De Carricitos Grant. This is the first production developed in the county, and it opens the way for deeper exploration.

In the southwestern part of Brooks County, California Oil Co. No. 1-B Jose Garcia, which several weeks ago made its appearance as a possible pool opener when it flowed oil and salt water, was replugged back to 2,485 feet and after perforating the casing with 48 holes from 2,457½-77 feet, it came in flowing 20 bbls. of fluid an hour, most of which was fresh water with a skim of oil. The operators blew the well with gas and it started making 8 bbls. of fluid an hour, 11 per cent of which was water and the rest 26.4 gravity oil. It is flowing through a three-sixteenths inch choke with tubing pressure 145 pounds and casing pressure 280 pounds. It is located on a 265.3-acre tract in the Salnias Survey and was originally drilled to a depth of 8,022 feet.

Second Location in Colorado Field

A second location for the Colorado field, McMullen County, has been announced by J. H. Meeks for his No. 2 Martinez, being 2,250 feet from the north line and 330 feet from the east line of Survey No. 623. It is situated 660 feet south of the discovery well, which has been placed on the pump after it failed to develop sufficient pressure to flow naturally from sand at 3,010-17 feet. It is reported that Humble Oil & Refining Co. and several other companies are planning to drill in the area within the next few weeks.

One new wildcat location was announced for the county by Darby Petroleum Corp. for No. 1-A Hagist in the southeast quarter of Survey No. 13, about 8 miles north of the Eagle Hill field in Duval County.

Frank Gravis No. 1-A Schallert, located on the north flank of the Palangana Salt dome, Duval County, which last week came in flowing an estimated 50 to 60 bbls. of pipe-line oil an hour, sanded up. The screen was pulled and the operators are running slotted liner preparatory to testing a second time. The well, bottomed in sand at 2,744 feet, is in Survey No. 255.

In the same county and located northwest of San Diego, Intrepid Oil Co. No. 3 Parr is preparing to core ahead after testing salt water at 4,697-4,760 feet. The well is reported to have encountered numerous showings above that depth, but they have failed to pay off when tested. Location is in Survey 126.

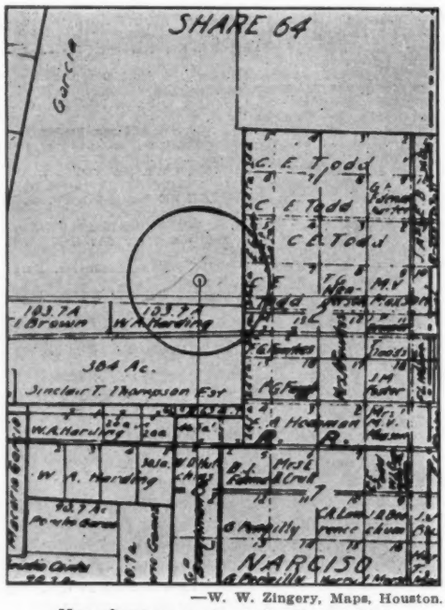
Interesting Wildcat

One of the most interesting wildcats drilling in the Laredo district is California Oil Co. No. 1 W. H. Langrebe, in the Thomas Hancock Survey, which appeared as a possible pool opener when it tested 296 feet of 41.5 gravity oil on a 6-minute drill stem test at 4,797 feet. The hole has been plugged back from its contract depth of 5,060 feet and 7-inch casing has been cemented at 4,850 feet.

Greta Sand Extended in Taft Field

Of particular importance in the Corpus Christi area was the extension of the Greta sand in the Taft field and the testing of a possible oil producer in the White Point field in San Patricio county.

Cage Production Co. No. 4 Mayo, located in the Taft field, cored the Greta sand at 4,925-29 feet and on a drill stem test at 3,917-29 feet, it tested 4,320 feet of pipe-line oil, and 7-inch casing has been cemented at 4,917 feet. The well, in the Ottman Survey, extends production from this sand three-quarters of a mile northwest of the original discovery well.



—W. W. Zingery, Maps, Houston.

Map shows approximate location of Shell Petroleum Corp. No. 1 Yturria in Willacy County, the discovery well of a new field

Although no gauge is available, Early Calloway and others No. 1 White Point Development Co., in the White Point gas field, southern San Patricio County, is believed to have opened the first oil production for the field, as it is flowing into the pits through one-quarter inch and three-eighths inch chokes showing oil, wash water and gas. Production is from sand at 4,900-15 feet which last week showed 510 feet of oil with 37 pounds pressure on a drill stem test.

Within the next few days much interest will be centered on the Flour Bluff field in Nueces County, where two wells are scheduled to be nearing the sand of the discovery well, Gem Oil Co. No. 1 J. T. Smith topped sand at 6,449 feet and is coring in salt water sand below 6,457 feet. Barnsdall Oil Co. and Flour Bluff Oil Corp. No. 2 Phillips, in Lot 12, section 55, is drilling in shale below 4,400 feet.

Completion of several wells and the announcement of new activity in the Saxet field in Nueces County were developments in that field. Texon Drilling Co. No. 1 Ocker has been completed in sand at 4,443½ feet, but no gauge was reported. It is located on a 13.4-acre tract in the C. Land Survey No. 404. Pan-American Production Co. No. 5-A Morgan, in Survey No. 403, flowed 123 bbls. in 16 hours on a potential test. Mills Bennett Production Co. No. 1 Kassner, in section 409, was completed at 4,100 feet and flowed 253 bbls. in 12 hours. One abandonment and one producer were recorded for the 5,800-foot sand. Renwar Oil Corp. No. 1 Fred Frank, an east offset to a producer, was coring in shale below 5,843 feet and apparently had missed the deep pay. Southern Minerals Corp. No. 10 Bliss was flowing into the pits from sand at 5,795-25 feet, the total depth.

Hinds Well Abandoned

In the Clara Driscoll field W. L. Hinds No. 1 Driscoll Sevier has been abandoned after it blew out from a depth of 3,220 feet. It ran wild for several hours, but killed itself when the hole bridged over. The same operator is planning to start a second well within the next few days. H. M. Reed No. 1 Roper flowed 51 bbls. in 6 hours on a potential test through a five-thirty-seconds inch choke with casing pressure 1,575 pounds and tubing pressure 1,350 pounds. Oil sand was cored from 3,888 to 3,907 feet, the total depth.

Three completions and two locations were announced for the Plymouth field, San Patricio County. Plymouth Oil Co. No. 58-C Welder flowed 144 bbls. in 24 hours through a one-eighth inch choke from sand at 5,508-16 feet, the total depth. Same company's No. 56-C Welder flowed 135 bbls. from 15 feet of sand bottomed at 5,649 feet, and No. 58-C Welder has been completed in sand at 5,634-46 feet, but no gauge had been made. No. 64-C in section 71 is being rigged up while material is being moved in for Magnolia Petroleum No. 9 Corpus Christi Bank & Trust Co.

Southwest of Rio Grande City, across the border in Mexico, Texas-Ohio Oil Co. No. 4 Rancherias has been plugged back from 6,022 feet to complete as a gas well in the discovery horizon at 1,900 feet. It is reported that a gas line will be built to carry gas from the two wells to San Pedro, Mexico, opposite Roma, Texas, to connect with the United Gas Co.'s line from Jennings, in Webb County, to Monterrey, Mexico. One of the latest wildcats spudded in this area is Cia. de Petroleo "El Charro" S. A. No. 7 Rio Bravo, located on a 500,000-acre block. It has cemented 13⅜-inch casing at 992 feet. The test is located 30 miles southwest of Reynosa.

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Canadian Fields

Completions and Operations in Northwest and in Ontario

By VICTOR LAURISTON

CHATHAM, Ontario, Sept. 12.—Deliveries from the Turner Valley field to the Calgary refineries in August totaled 98,449 bbls. of naphtha and crude, compared with 101,322 bbls. in July, the highest since June, 1931, when 113,449 bbls. were marketed. The August deliveries included 4,981 bbls. of clear naphtha, 59,325 bbls. of discolored naphtha and 1,768 bbls. of light crude to Imperial Oil Refineries, Ltd. Deliveries to the Bell Refining Co. in August were 32,375 bbls., including 25,885 bbls. of light crude from Turner Valley Royalties No. 1.

At the end of August, 1936, deliveries totaled 661,236 bbls. against 645,730 bbls. in the eight months of 1935. For the first five months of 1936, deliveries were considerably below the monthly average of 1935. The marked increase since then has been due entirely to Turner Valley Royalties No. 1, which from June 15 to the end of August has delivered 62,870 bbls.

Detailed figures of the Alberta government for July show Royalite Oil Co. with 52,347 bbls. was the largest producing unit. Turner Valley Royalties No. 1, with 26,640 bbls. ranked second, and the Miracle-Mill City group third with 10,955 bbls. Century Royalties No. 1 ranked fourth with 5,529 bbls. and Model Oils, Ltd. fifth with 5,356 bbls. Among the newer wells, British Dominion Oil & Development Corp. No. 4, section 28-18-2w5, made 2,564 bbls. while deepening in the lime.

Dalhousie Spuds Test

North and west of the Home section in the older portion of the South Turner Valley field, Dalhousie Oil Co. No. 8, LSD 11, section 30-19-2w5, is below 42 feet. Location is in the center of a full section owned by the Dalhousie company, subsidiary of Imperial Oil, Ltd., and acreage north and east is held by Imperial subsidiaries, while Advance Oil Co. owns the half section to the south. Section 30 is north and west of section 20-19-2w5, where Home Oil Co. some 10 years ago brought in a number of prolific naphtha producers. The Dalhousie location is on the west flank, heretofore regarded as too far west for commercial production. It is the third west side well started this summer by Imperial interests.

Farther south and east, Sterling Pacific No. 3, LSD 13, section 33-18-2w5, also a west side test by Imperial interests, is below 5,166 feet, after drilling through the Dalhousie sands.

West Side Tests

On the west side, Renfrew Royalties No. 1 Morris & Goodfellow, LSD 3, section 28-18-2w5, is deepening from 6,021 feet. This is the only test in the Madison lime on the west side.

In section 21-18-2w5, Soverign Royalties No. 1 Myers & Wright, LSD 14, is below 5,212 feet and getting close to the Home sands. Foundation Petroleums No. 1, LSD 5, same section, is in the Home sands below 5,505 feet, and is expected to get the Madison limestone between 6,200 and 6,300 feet, about 100 feet higher than in Turner Valley Royalties No. 1, which is 1⅜ miles north. Foundation No. 1 is the farthest west drilling undertaken in the newer section of South Turner Valley, and has logged normally except for the lower Benton which was abnormally thin, only 170 feet.

Newfold Royalties No. 1, LSD 11, is rigging rotary for a new test offsetting Turner Valley Royalties No. 1 to the southeast.

South Turner Valley

In the south end of the field, High Wood-Sarcee Oils No. 2, LSD 1, section 21-18-2w5, is continuing production tests with a variety of flows and pressures. Recovery runs from 20 to 30 bbls. a day from about 3,000,000 feet of wet gas.

Tests in the Foothills

In the Forest Reserve area west of Olds, Hunter Valley Oil Co. No. 1 McLaren, LSD 12, section 13-31-10w5, has resumed from 5,732 feet after changing to rotary.

On the Kootenay dome west of Calgary, Roxana Petroleum No. 1, section 8-24-7w5, has resumed from 860 feet and the Madison lime is expected between 890 and 900 feet.

On the Moose dome, Moose Oils No. 1, LSD 8, section 29-22-6w5, got its first light gas show in the Minnewanka section of the Banff shales at 548 feet and is deepening to test the Devonian lime. It is logging about 150 feet lower than Moose No. 1, a half mile north.

On the Highwood-Sinclair structure southwest of Turner Valley, Maple Leaf Royalties No. 1 Banner, LSD 6, section 34-17-3w5, at 2,720 feet has fished about 2,100 feet of collapsed casing and may sidetrack the remainder.

On the Pekisko structure, Pekisko Hills Co. No. 1, LSD 6, section 6-17-2w5, drilled out the Madison limestone into the Banff shales between 3,960 and 4,110 feet and is below 4,285 feet with the shales showing considerable oil impregnation. Production is anticipated in the underlying Devonian lime.

On the Watson structure, Mar Jon Oil Co. No. 3, LSD 3, section 4-10-2w5, is below 5,140 feet in a dark shale of the lower Blairmore formation where the drill encountered a soft, sticky substance with pronounced petroleum odor.

High River-Aldersyde

In the High River-Aldersyde district, east of Turner Valley, Ranchmen's Gas & Oil Co. No. 1, LSD 16, section 13-20-29w4, is in a brown sand below 6,870 feet with increased oil impregnation. Intermittent oil shows have been encountered for about 500 feet, but in a very tight formation. The test will probably be deepened to more than 7,000 feet.

Border Fields

In the Taber area, Plains Petroleum Corp. No. 1, LSD 13-14, section 29-9-17w4, has spudded.

Acreage on both sides of the international boundary extending from a point about 5 miles northwest of the Whitlash field in Montana will be tested by John Reynolds, Leo Sweeney and others. A series of three structure tests will be put down after which a commercial deep test will be undertaken on the Alberta end of the acreage.

Cardston Test

On the Cardston structure, southern Alberta, Franco Oils No. 1, LSD 3, section 5-3-25w4, is below 3,300 feet with 13⅝-inch hole and has reached the top of the Eagle sands. Gas shows were met at 1,550 feet and 2,640 feet, increasing gradually. The test was started for oil but the company has the franchise to supply gas to Cardston, and commercial production is looked for. The gas is sweet with paraffin base, and there have been some small shows of crude. Dr. F. F. Hintze of Salt Lake City, Utah, is chief geologist, and associate geologists are J. S. Irwin of Calgary and Major Grenville Howard of Hager & Howard, Winnipeg, Manitoba. W. F. Thorn of Moose Jaw, Saskatchewan, is vice president and general manager.

Quaich Test Planned

James Kerr of Victoria, British Columbia, representing British capital, has secured an exploration permit covering 5,024 acres in the southwestern Alberta foothills, in Townships 8, 9 and 10, Range 3w5. The area extends approximately 18 miles north of the Crow's Nest Railway, and includes the Quaich structure reported on some years ago by E. H. Cunningham Craig. The acreage parallels the Watson structure on the

(Continued on Page 90)

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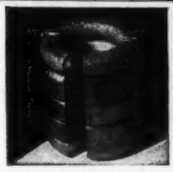

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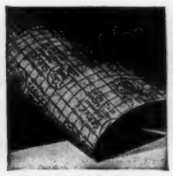

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Central West

Operations in Central Ohio, Kentucky, Illinois, Indiana

By GEORGE A. WHITNEY

FINDLAY, Ohio, Sept. 14. — The most interesting feature in the Central West fields this past week was the announcement by a group of Michigan oil and gas operators that four tests for oil will be drilled in Lucas County, in northwestern Ohio. The locations for these tests have been made on the France Stone Co. property, 2 miles southwest of Sylvania, Ohio, on the Silica road, in Sylvania Township, and about 8 miles northwest of Toledo.

Elmer A. Roth, and his Detroit associates, who will drill these wells, claim the presence of oil and gas in paying quantities is indicated by the rock formation, which is exposed by quarries in this vicinity, and many surrounding acres of land have been leased by these operators. Although these tests are to be drilled primarily for oil, the operators are planning to supply Sylvania, and surrounding towns with natural gas should it be found in commercial quantities.

The drilling contract has been awarded to C. O. Moore, of Mount Vernon, Ohio, and a rig has been moved on location and work is under way on the first of these tests.

There were no other important developments in the Lima field the past seven days and only three completions were reported. In Putnam County, section 22, Blanchard Township, Brown & Co. No. 2 L. J. Wanamaker, total depth 1,374 feet, made 30,000 feet of gas and was estimated as an 8-bbl. pumper. In section 27, same township, C. K. Rodgers has a rig up on the H. Labe property. L. O'Conner No. 1 H. Tobias, in section 13, Blanchard Township, had a small show of oil and gas at 1,385 feet and has been abandoned.

In Vanwert County, section 18, Bridge Township, Marsh Foundation No. 5, on Marsh Foundation School property, was drilled through the Trenton 1,202-12 feet and gauged 298,000 feet of gas the first 24 hours after a shot.

CENTRAL OHIO

One oil producer, four dry holes and three gas wells were completed in the Central Ohio field. Kuntz-Hulse, Inc., No. 3 C. E. Moore, section 8, Pike Township, Coshocton County, produced 90 bbls. the first 24 hours after a shot. In section 17, Perry Township, Preston Oil Co. No. 4 Cary Harris made a good show of oil at 3,139 feet and will be shot. In section 16 the same operator's No. 3 Grace McCament is being cleaned out after a shot. In section 17, same township, Preston Oil Co. is spudding on the Evert Vanwinkle property. Ohio Fuel Gas Co. has staked a location on the Russel Bower farm in section 1, Jefferson Township. In section 9, Tiverton Township, H. E. Perkins & Co. No. 1 W. W. Smith is down 3,068 feet.

Harbaugh & Co. No. 2 G. N. Wise, Lot 60, Randolph Township, Portage County, was completed below the Berea at 380-410 feet and is dry.

In Wayne County, section 11, Clinton Township, Ohio Fuel Gas Co. No. 1 Eugene Sidle was drilled through the second Clinton formation at 3,134-57 feet and was dry. The same company has made a location on property of the College of Wooster, in section 5. In section 11, Congress Township, Ankrom & Co. No. 1 Charles Myers was drilled through the Berea at 380-410 feet and has been shut down for orders, after making 2,000 feet of gas.

East Ohio Gas Co. has abandoned the Howard Fawcett location in section 17, Jackson Township, Stark County. In section 15, Plain Township, Lyons & Co. are building a rig for No. 2 on the Hiram Shaub property. In section 8, Jackson Township, Ohio Fuel Gas Co. No. 1 Arthur Clay is drilling in.

In Holmes County, section 12, Mechanic Township, Bell Brothers No. 1 H. and A. Logsdon was completed below the Berea at 909-42 feet and was dry. Mehowa Oil & Gas Co. No. 3 George Huston, section 11, Washington Township, is down 350 feet. In section 31, Monroe Township, Ohio Fuel Gas Co. is building a rig on the T. W. Strouse property.

Edson Co. No. 1 Reuben Chester, in section 16, Avon Township, Lorain County, was drilled through the second Clinton sand at 2,340-49 feet and is dry. In section 28 William Dempsey is down 1,070 feet on the Robert Barr lease. Ohio Fuel Gas Co. has staked a new location on the Fred N. Walkden property in Lot 80, Columbia Township.

Ohio Fuel Gas Co. has made a location on Lot 49, Sullivan Township, Ashland County, on the E. E. Drake property, and on Lot 51 the same operators are down 1,485 feet on the E. C. Johnson property.

In Richland County, section 20, Worthington Township, Ohio Fuel Gas Co. No. 1 Anna Shaffer was drilled through the first Clinton sand at 2,380-97 feet and the second Clinton at 2,415-36 feet to the Bottom sand rock, and it gauged 5,220,000 feet of gas the first 24 hours after a shot. In section 34, Mifflin Township, Harmon & George No. 1 Ray Shook, which has been shut down, is drilling again at 2,487 feet.

In Morgan County, section 18, Marion Township, Williams Brothers No. 3 W. M. Hilaman was completed below the second Cow Run at 724-30 feet and gauged 559,000 feet of gas. In Windsor Township, Location 2, Mosier & Co, has a rig up on the Charles Yarnell property for No. 32. Same location, Bachelor & Co. has rigged up No. 8 Marie Yarnell. In section 9, Deerfield Township, Joe Pierce No. 2 Charles Nelson is shut down at 625 feet for casing. Barnesville Development Co. No. 1 C. E. Combs, section 9, Center Township, drilled through Oriskany sand at 3,710-16 feet and is shut down for orders with 1,500 feet of water in the hole.

In Gallia County, section 11, Cheshire Township, Ohio Fuel Gas Co. No. 1 W. C. Reed was dry in the second Berea, and is drilling to the Shale.

Ohio Fuel Gas Co. staked location on the F. W. Muche property, Tract 3, Olmsted Township, Cuyahoga County.

In Summit County, section 31, Green Township, East Ohio Gas Co. No. 1 Freeman Daily is fishing at 3,828 feet, and in section 19 same operators are down 3,900 feet on the Nelson Gormany property.

In Perry County, section 1, Reading Township, Ohio Fuel Gas Co. No. 1 Noble Hoover was completed below the Clinton sand at 2,748-69 feet and gauged 5,050,000 feet of gas the first 24 hours. In section 17, Clayton Township, Ohio Fuel Gas Co. No. 1 William Griffith has a good show of oil 15 feet in the Top Clinton sand at 3,184 feet, and is to be drilled through the sand. Wehrle Brothers No. 2 Alma Beard heirs, in section 36, Thorn Township, has been completed as a 2,000,000-foot gas well, after recovering the tools. In section 25, Coal Township, Kachelmacher Estate No. 15, Hemlock Coal Co., is down 3,350 feet.

Charleston Gas Co. No. 1 Jacob Kepler, section 19, Ward Township, Hocking County, which was drilled to 1,965 feet, was filled back to 1,800 feet and shot, but made a very small volume of gas and it has been shut down for orders.

INDIANA FIELD

In the Indiana field five completions were reported. In Pike County, SW NW section 33, Clay Township, Murphy Oil Co. No. 3 Stewart Brothers started at 10 bbls. from the Barker sand. In section 24, Jefferson Township, P. G. Thomas is drilling on the John Harrison property and is down 570 feet.

In Shelby County, section 29, Van Buren Township, J. Harvey Snider No. 1 Ira Smith, with a total depth of 878 feet, was a small gas well.

Haney & Hollingsworth is drilling No. 4 on the William Kress farm in section 8, Anderson Township, Perry County. In section 25, Oil Township, McGrain Oil & Gas Co. is drilling No. 2 on the John Farley property.

In Knox County, SE NE of section 15, Busseron Township, O. A. Thayer No. 4 D. H. Yates, with a total depth of 808 feet, produced 10 bbls. the first 24 hours after a shot. The same operators are drilling on the N. A. Hall property, SW NE section 15.

In Daviess County, section 34, Barr Township, Oliphant & Sage No. 1 Eva Fuhrman was a dry hole. In section 8, same township, D. L. Norris & Co. is down 590 feet on the George O'Brien lease. In Harrison Township, section 4, John Reinsel No. 1 O. and G. Smith was drilled to a total depth of 750 feet and is dry.

KENTUCKY FIELD

Total runs made from wells served by the Illinois Pipe Line Co. in western Kentucky during August was 122,-213.95 bbls., a decline of 950 bbls. from July. There has been a decided increase in activity in Ohio County and six of the 10 completions reported in the Kentucky field were in that county. In the Deanfield pool, Ohio County, J. B. Mayer No. 14 Martha Medcalf produced 20 bbls. the first 24 hours, after a shot and the same operators are drilling in No. 15 and have a rig up for No. 16 on this farm. In the same pool, Kentucky Natural Gas Co. No. 19 M. Rodgers & Co. property had an initial production of 20 bbls. Same operators are drilling No. 20 and have a rig on location for No. 21. Same pool, Cane Run Petroleum Co. No. 12 A. F. Bellamy produced 45 bbls. the first 24 hours after a shot.

In the Dundee pool, Ohio County, Kelly & Co. No. 1 Lon Ralph was a dry hole and the same operators have a rig up for No. 2 on this farm. Same pool, Petroleum Exploration Co. No. 10 Ronnie Graham produced 40 bbls. the first 24 hours after a shot. The same operators are drilling No. 11, and have a rig on location for No. 12 on this property.

In the Oak pool, Ohio County, Cumberland Petroleum Co. No. 30, Rolla Richards, had an initial production of 25 bbls. and a rig has been moved on location for No. 31.

In McLean County, in Livermore, W. E. Hupp & Co. No. 1 John Givens town lot produced 50 bbls. the first 24 hours after a shot. Same vicinity, Stinnet Brothers No. 1, on the Inez Cox town lot, had an initial production of 100 bbls. On the Sutherland town lot, in Livermore, Lion Oil Co. No. 1 made 50 bbls. the first 24 hours. Sunflower Oil & Gas Co. No. 1, on the Wright & Rowe town lots, started at 90 bbls. per day.

Canadian Fields

(Continued from Page 89)

west. The only previous drilling in the immediate area was a test in 1923 by Gap Oil Concessions in LSD 11, section 33-10-3w5, abandoned at 770 feet without reaching conclusive depth.

Saskatchewan Drilling

In the Pi Wei Hills area of northern Saskatchewan, Northern Royalties, Ltd. is drilling for oil. Perry L. Withers and associates of Yorkton and Saskatoon are planning to drill on the same structure this fall.

Drilling in Ontario

In the Dover field, Kent County, Ontario, Ajax Oil & Gas Co. No. 12, Johnston farm, Dover East Township, finished in the Trenton limestone at 3,108 feet with a small flow. A shot of 300 quarts brought it up to 500,000 feet a day.

In the Valetta section of the Tilbury field, Kent County, Walker & Drake No. 1, SE quarter Lot 6, Concession 9, Tilbury East Township, reported making 10 to 20 bbls. on the pump.

On the Thom Hastings farm, Concession 8 Enniskillen, 7 miles southeast of Petrolia, W. J. Hussey & Son are drilling below 490 feet for shallow oil for a Flint, Mich., syndicate.

In the Brownsville gas field, Oxford County, Aloka Oil & Gas Co. No. 5, Lot 22, Concession 12, Dereham Township, finished between 920 and 925 feet with 241,000 feet.

In the Eden field Alex Rogers & Co. of Tillsonburg have finished No. 1 in NE quarter Lot 2, Concession 2, Middleton Township, Norfolk County, with a production of 400,000 feet a day of dry gas from the upper sand at about 900 feet.

WILDCAT OPERATIONS

CALIFORNIA

IMPORTANT WELLS AND NORTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Shell Oil Co., No. 18 Capitan, Santa Barbara Co.	32- 5-30	1,531	rig. to pump
Shell Oil Co., No. 19 Capitan, Santa Barbara Co.	32- 5-30	1,530	sd. sh. drlg.
General Pet. Corp., No. 16 Capitan, Santa Barbara Co.	32- 5-30	2,920	pump. water
Barnsdall-Rio Grande, No. 1 Elwood, Santa Barbara	15- 4-29	3,491	O.S. drlg.
Bush Oil Co., No. 2 Santa Maria, Santa Barbara Co.	25-10-34	4,125	hd. sd. drlg.
Field Gasoline Corp., No. 1 Santa Maria, Santa Barbara	21- 9-33	1,675	sd. sh. drlg.
Apache Oil Co., No. 1 Santa Maria, Santa Barbara Co.	31- 9-33	1,162	sd. sh. drlg.
Union Oil Co., No. 8 Santa Maria, Santa Barbara Co.	24-10-34	3,004	cmtd. 2,995
Union Oil Co., No. 11 Santa Maria, Santa Barbara Co.	26- 9-34	3,700	recmtd. 3,656
Field, O. C., No. 1 Lompoc, Santa Barbara Co.	11- 7-33	2,027	sd. sh. drlg.
Moore, Inc., No. 1 Santa Maria, Santa Barbara Co.	25-10-35	6,400	hd. sd. drlg.
Top Row Oil Co., No. 1 Lompoc, Santa Barbara Co.	10- 6-35	761	sd. sh. drlg.
Bankline Oil Co., No. 1 Coal Oil Pt., Santa Barbara Co.	tideland	5,510	redrlg. 3,897
Calkan Pet. Co., No. 1 Sespe, Ventura Co.	23- 5-20	904	cleaning out
Condor Oil Co., No. 1 Sespe, Ventura Co.	6- 4-19	1,376	reaming
Topa Topa Oil Co., No. 1 Sespe, Ventura Co.	33- 5-19	2,200	cmtd.
Waalbi Oil Co., No. 1 Sespe, Ventura Co.	33- 5-19	998	hd. sh. drlg.
Texas Co., No. 130 Shiells Canyon, Ventura Co.	4- 3-19	4,213	flow. 640 b.d.
Oil Ridge Oil Co., No. 1 Hopper Canyon, Ventura Co.	6- 4-18	2,365	hd. sd. drlg.
Bolsa Chica Oil Co., No. 4 Temescal, Ventura Co.	4- 4-18	2,151	sd. sh. drlg.
Rennie Brothers, No. 1 Santa Paula, Ventura Co.	21- 4-21	1,040	sd. sh. drlg.
Munding, J. J., No. 1 Ojai, Ventura Co.	22- 4-22	757	sd. sh. drlg.
Texas Co., No. 1 Saticoy, Ventura Co.	1- 2-22	2,961	hd. sh. drlg.
Ventura Expl. Co., No. 1 Saticoy, Ventura Co.	30- 3-22	9,396	sd. sh. drlg.
Vaca Oil Co., No. 1 Oxnard, Ventura Co.	5- 1-21	2,820	will cmt.
General Pet. Corp., No. 2 Oxnard, Ventura Co.	26- 2-23	9,400	dry; abd.
Continental Oil Co., No. 5 San Miguelito, Ventura Co.	24- 3-24	7,040	recmtd. 5,955
General Pet. Corp., No. 1 Javon, Ventura Co.	15- 3-24	1,680	sd. sh. drlg.
Continental Oil Co., No. 2 Javon, Ventura Co.	15- 3-24	3,590	redrlg. 2,285
C. C. M. Oil Co., No. 1 Javon, Ventura Co.	15- 3-24	5,921	P.B. 5,855
Honolulu Oil Corp., No. 1 South Mountain, Ventura Co.	23- 3-21	3,670	O.S. drlg.
Duty, George, No. 1 South Mountain, Ventura Co.	13- 3-21	571	sd. sh. drlg.
Associated Oil Co., No. 25 V.L.W. Ventura, Ventura Co.	23- 3-23	4,162	sd. sh. drlg.
Associated Oil Co., No. 30 V.L.W. Ventura, Ventura Co.	24- 3-23	2,986	sd. sh. drlg.
Shell Oil Co., No. 28 Edison Ventura, Ventura Co.	21- 3-23	6,320	O.S. drlg.
Shell Oil Co., No. 88 Taylor Ventura, Ventura Co.	30- 3-23	6,354	sd. sh. drlg.
Den Petroleum Co., No. 1 Devils Den, Kern Co.	20-25-19	1,287	idle
Standard Oil Co., No. 1 Lost Hills, Kern Co.	2-26-20	6,887	fish. D.P.
Associated Oil Co., No. 3 Lost Hills, Kern Co.	2-26-20	1,668	pump. 480 b.d.
Associated Oil Co., No. 4 Lost Hills, Kern Co.	1-26-20	2,710	sd. sh. drlg.
Associated Oil Co., No. 5 Lost Hills, Kern Co.	2-26-20	....	rigging up
Universal Oil Consd., No. 1 Lost Hills, Kern Co.	20-26-21	2,987	sd. sh. drlg.
East Puente Oil Co., No. 22 McKittrick, Kern Co	11-30-21	1,990	gr. sd. drlg.
Bergman, H. L., No. 1 McKittrick, Kern Co.	30-30-22	1,391	br. sh. drlg.
General Pet. Co., No. 1 South Belridge, Kern Co.	30-28-21	11,377	suspended
Rio Grande Oil Co., No. 1 Belridge, Kern Co.	18-28-20	2,554	sd. sh. drlg.
Associated Oil Co., No. 5 North Belridge, Kern Co.	34-27-20	8,100	hd. sh. drlg.
Belridge Oil Co., No. 5-1 North Belridge, Kern Co.	1-28-20	4,644	sd. sh. drlg.
Shell Oil Co., No. 1 Antelope Plains, Kern Co.	5-28-20	1,680	sd. sh. drlg.
Union Oil Co., No. 20 North Belridge, Kern Co.	36-27-20	9,684	P.B. 4,726
Continental Oil Co., No. 8 North Belridge, Kern Co.	36-27-20	6,491	sd. sh. drlg.
Associated Oil Co., No. 21 Kern Front, Kern Co.	23-28-27	2,200	pump. test
Associated Oil Co., No. 31 Kern Front, Kern Co.	23-28-27	1,773	sd. sh. drlg.
Big Eleven Oil Co., No. 1 Kern Front, Kern Co.	18-28-28	1,174	to deepen
Rex Oil Co., No. 2 Kern Front, Kern Co.	4-28-27	2,804	O.S. drlg.
Republic Pet. Co., No. 11 Kern Front, Kern Co.	24-28-27	2,050	cmtd. 1,750
Italo Pet. Corp., No. 33 Kern Front, Kern Co.	16-28-27	1,975	sd. sh. drlg.
Seven Spot Oil Co., No. 1 Kern Front, Kern Co.	13-28-27	1,970	recmtd. 1,150
General Pet. Corp., No. 10 Kern Front, Kern Co.	14-28-27	1,936	pump. 125 b.d.
Vega Oil Co., No. 2 Kern Front, Kern Co.	11-28-27	1,895	P.B. 1,740
Union Oil Co., No. 1 Kern Front, Kern Co.	11-28-27	1,480	sd. sh. drlg.
Kaar, Charles, No. 1 Kern Front, Kern Co.	26-28-27	520	sd. sh. drlg.
Bell Corp., No. 2 McVan, Kern Co.	14-27-27	1,154	O.S. drlg.
McAdams Oil Co., No. 1 Dominion, Kern Co.	32-26-28	1,880	pump. 25 b.d.
Harp, E. J., No. 1 Dominion, Kern Co.	27-26-28	1,422	recmtd. 1,415
British-American Oil Co., No. 1 Mount Poso, Kern Co.	31-27-28	1,500	sd. sh. drlg.
Chevalier, J. J., No. 1 Mount Poso, Kern Co.	3-27-28	965	sd. sh. drlg.
Shell Oil Co., No. 27 Mount Poso Vedder, Kern Co.	9-27-28	1,765	pump. 471 b.d.
Shell Oil Co., No. 28 Mount Poso Vedder, Kern Co.	9-27-28	1,716	cmtd. 1,681
Shell Oil Co., No. 29 Mount Poso Vedder, Kern Co.	9-27-28	1,650	cleaning out
Bethlehem Expl. Co., No. 2 Mount Poso, Kern Co.	10-27-28	1,570	recmtd. 1,508
Bargol Oil Co., No. 3 Mount Poso, Kern Co.	11-27-27	1,128	O.S. drlg.
Lytle, R. S., No. 1 Mount Poso, Kern Co.	26-27-28	1,542	cleaning out
Union Oil Co., No. 1-B Mount Poso Tribe, Kern Co.	28-27-28	1,563	sd. sh. drlg.
Cochran Oil Co., No. 1 Jasmine, Kern Co.	31-25-27	5,153	dry; abd.
Doyle Pet. Co., No. 1 Jasmine, Kern Co.	15-25-27	2,920	cleaning out
Hall-Baker Co., No. 1 Jasmine, Kern Co.	27-25-27	1,684	sd. sh. drlg.
Elbee Oil Co., No. 1 Fruitvale, Kern Co.	23-29-27	3,805	blew out
Exeter Oil Co., No. 1 Fruitvale, Kern Co.	21-29-27	4,165	pump. 150 b.d.
Western Gulf Oil Co., No. 29 Fruitvale, Kern Co.	21-29-27	3,871	cmtd. 3,805
Western Gulf Oil Co., No. 30 Fruitvale, Kern Co.	27-29-27	3,375	sd. sh. drlg.
Miami Oil Co., No. 1 Fruitvale, Kern Co.	21-29-27	1,750	sd. sh. drlg.
Mohawk Oil Co., No. 23-3 Fruitvale, Kern Co.	23-29-27	2,851	idle
Oil Incorporated, No. 1 Fruitvale, Kern Co.	26-29-27	3,390	flow. G.&W.
Nydia Pet. Co., No. 2 Fruitvale, Kern Co.	26-29-27	3,410	pump. test
White & Haar, No. 1 Fruitvale, Kern Co.	28-29-27	4,395	pump. 150 b.d.
Allied Pet. Co., No. 20 Mountain View, Kern Co.	19-30-29	3,971	sd. sh. drlg.
Barnsdall Oil Co., No. 8 Mountain View, Kern Co.	19-30-29	4,976	O.S. drlg.
Buffalo Oil Co., No. 4 Mountain View, Kern Co.	19-30-29	1,950	sd. sh. drlg.
Hogan Pet. Co., No. 16 Mountain View, Kern Co.	32-30-29	6,159	rig. to pump
Sheldon Oil Co., No. 2 Mountain View, Kern Co.	19-30-29	3,530	sd. sh. drlg.
Standard Oil Co., No. 32 Mountain View, Kern Co.	13-30-28	3,170	sd. sh. drlg.
Treasure Oil Co., No. 1 Mountain View, Kern Co.	12-30-28	5,654	sd. sh. drlg.
Fullerton Oil Co., No. 1 Mountain View, Kern Co.	19-30-29	5,373	dry; abd.
Shell Oil Co., No. 10 Mountain View, Kern Co.	32-30-29	5,916	pump. 185 b.d.
Shell Oil Co., No. 11 Mountain View, Kern Co.	32-30-29	1,000	cmtd. 1,000
Mohawk Pet. Co., No. 3 Mountain View, Kern Co.	30-30-29	5,770	will deepen
Mohawk Pet. Co., No. 8 Mountain View, Kern Co.	30-30-29	2,956	sd. sh. drlg.
Mohawk Pet. Co., No. 2 Arvin, Kern Co.	10-31-29	2,991	sd. sh. drlg.
General Pet. Corp., No. 1 Arvin, Kern Co.	36-31-29	5,964	sd. sh. drlg.
Associated Oil Co., No. 1 Arvin, Kern Co.	3-31-29	2,961	sd. sh. drlg.
Shell Oil Co., No. 1 Arvin, Kern Co.	15-31-29	4,686	sd. sh. drlg.
Associated Oil Co., No. 1 Rio Bravo, Kern Co.	30-29-25	951	sd. sh. drlg.
Plute Holding Co., No. 1 Round Mountain, Kern Co.	17-28-29	716	sd. sh. drlg.
Shell Oil Co., No. 7 Round Mountain, Kern Co.	7-28-29	1,525	pump. 560 b.d.
Shell Oil Co., No. 10 Caldwell Round Mountain, Kern	7-28-29	1,760	sd. sh. drlg.
Shell Oil Co., No. 15 Caldwell Round Mountain, Kern	7-28-29	1,495	pump. test
Honolulu Oil Corp., No. 37 Round Mountain, Kern Co.	18-28-29	2,275	cleaning out
Honolulu Oil Corp., No. 12 Round Mountain, Kern Co.	20-28-29	1,910	cmtd. 1,849
Honolulu Oil Corp., No. 1-J Round Mountain, Kern Co.	18-28-29	1,954	rig. to pump
Cole & Wood, No. 1 Edison, Kern Co.	24-30-29	821	water witch
Ohio Oil Co., No. 4-1 Edison, Kern Co.	4-30-29	3,398	sd. sh. drlg.
Buffalo Oil Co., No. 2 Edison, Kern Co.	24-30-29	797	bailing
Jergins Trust, No. 23-5 Edison, Kern Co.	23-30-29	2,075	will deepen
Marley, W. F., No. 1 Edison, Kern Co.	19-30-30	877	cleaning out
Wood-Callahan Oil Co., No. 5 Edison, Kern Co.	23-30-29	1,960	sd. sh. drlg.
Bender, E. A., No. 1 San Emidio, Kern Co.	14-10-23	1,100	br. sh. drlg.
Texas Co., No. 1 San Emidio, Kern Co.	11-11-22	9,076	sd. sh. drlg.
Standard Oil Co., No. 10-1 Stevens, Kern Co.	20-30-26	5,655	sd. sh. drlg.
Shell Oil Co., No. 2 Stevens, Kern Co.	29-30-26	7,780	blew out
Fenray Oil Co., No. 1 Midway-Sunset, Kern Co.	34-32-24	4,210	sidetrack. D.P.
C. C. M. Oil Co., No. 1-28 Midway-Sunset, Kern Co.	28-32-23	2,944	sd. sh. drlg.
C. C. M. Oil Co., No. 18-21 Midway-Sunset, Kern Co.	21-32-23	2,153	pump. 330 b.d.
C. C. M. Oil Co., No. 19-21 Midway-Sunset, Kern Co.	21-32-23	1,540	sd. sh. drlg.
Evans, H. B., No. 11 Midway-Sunset, Kern Co.	35-32-23	2,098	hd. sd. drlg.
Evans, H. B., No. 16 Midway-Sunset, Kern Co.	35-32-23	531	idle
Garner Royalties, No. 7 Midway-Sunset, Kern Co.	32-32-23	1,651	C.P. 1,630
Quality Oil Co., No. 3 Midway-Sunset, Kern Co.	23-32-23	2,174	sd. sh. drlg.
General Pet. Corp., No. 32-5 Midway-Sunset, Kern Co.	32-32-24	3,180	P.B. 3,010
Zamlock, Carl, No. 1 Midway-Sunset, Kern Co.	32-32-23	1,592	sd. sh. drlg.
Hoyt, Otis, No. 3 Midway-Sunset, Kern Co.	7-11-23	1,796	bailing
Standard Oil Co., No. 3-25-L Midway-Sunset, Kern Co.	25-12-24	5,224	cleaning out
Standard Oil Co., No. 18 Midway-Sunset, Kern Co.	33-32-24	2,500	cmtd. 2,478
Five Points Oil Co., No. 2 Midway-Sunset, Kern Co.	18-11-23	1,571	sd. sh. drlg.
Pomoc Oil Co., No. 8 Midway-Sunset, Kern Co.	15-32-23	753	sd. sh. drlg.
Goldman, Frank, No. 3 Midway-Sunset, Kern Co.	22-32-23	1,131	sd. sh. drlg.
Birch-Royer Oil Co., No. 1 Midway-Sunset, Kern Co.	32-32-23	....	rigging up
Jerman, R. W., No. 1 Midway-Sunset, Kern Co.	17-31-23	3,676	sd. sh. drlg.
Pan American, No. 66 Midway-Sunset, Kern Co.	22-32-23	1,552	sd. sh. drlg.
Union Oil Co., No. 2 Midway-Sunset, Kern Co.	22-32-23	2,006	pump. 450 b.d.
Union Oil Co., No. 9 Midway-Sunset, Kern Co.	25-12-24	2,837	pump 260 b.d.
Merritt Annex Oil Co., No. 5 Midway-Sunset, Kern Co.	25-12-24	2,976	pump 351 b.d.
North American, No. 3 Midway-Sunset, Kern Co.	2-32-24	1,570	sd. sh. drlg.
Associated Oil Co., No. 1 Tejon, Kern Co.	17-11-19	2,776	hd. sd. drlg.
Reserve Oil & Gas Co., No. 5 Tejon, Kern Co.	33-11-19	4,474	fish. liner
Western Gulf, No. 3 Cantua, Fresno Co.	3-17-15	8,498	sd. sh. drlg.
Union Oil Co., No. 1 Lillis-Welsh, Fresno Co.	24-21-16	11,127	P.B. 10,700
Shell Oil Co., No. 1 Kettleman North, Fresno Co.	36-21-17	8,807	redrlg. 7,865
K. N. D. A., No. 2-20-J Kettleman North, Fresno Co.	20-21-17	8,875	flow. 1,483 b.d.
K. N. D. A., No. 38-18-J Kettleman North, Fresno Co.	18-21-17	8,875	hd. sd. drlg.
K. N. D. A., No. 21-30-J Kettleman North, Fresno Co.	30-21-17	7,717	hd. sd. drlg.
K. N. D. A., No. 43-30-J Kettleman North, Fresno Co.	30-21-17	8,142	test. W.S.O.
K. N. D. A., No. 52-28-J Kettleman North, Fresno Co.	28-21-17	5,471	sd. sh. drlg.
K. N. D. A., No. 63-28-J Kettleman North, Fresno Co.	28-21-17	6,743	br. sh. drlg.
K. N. D. A., No. 81-24-H Kettleman North, Fresno Co.	24-21-16	8,895	P.B. 8,750
K. N. D. A., No. 83-24-H Kettleman North, Fresno Co.	24-21-16	8,551	form. test
K. N. D. A., No. 72-24-J Kettleman North, Kings Co.	24-21-17	6,671	br. sh. drlg.
K. N. D. A., No. 47-2-P Kettleman North, Kings Co.	2-22-17	7,085	fish. casing
K. N. D. A., No. 51-2-P Kettleman North, Kings Co.	2-22-17	7,755	hd. sd. drlg.
Standard Oil Co., No. 38-27-J Kettleman North, Fresno	27-21-17	8,385	flow. 2,205 b.d.
Standard Oil Co., No. 32-19-J Kettleman North, Fresno	19-21-17	8,435	form. test
Standard Oil Co., No. 61-19-J Kettleman North, Fresno	19-21-17	8,391	fish. D.P.

KEY TO ABBREVIATIONS USED IN DRILLING REPORTS

Abd., abandoned.
Bldg., building.
B.D., barrels daily.
B.P., back pressure.
B.R., building rig.
Br. sh., brown shale.
B.S., basic sediment.
C.P., casing pressure.
Cd. or Crd., cored.
C.D., corrected depth.
Cg., coring.
C.L., center line.
Cmtd., cemented.
C.O., cleaning out.
Comp., completed.
Compr., compressor.
C.P., casing pressure, also cement through perforations.
Csg., casing.
D.D., drilling (or drilled) deeper.
Drlg. or Drg., drilling.
Drk. or Dk., derrick.
D.S., drill stem.
D.&A., dry and abandoned.
Fsg., fishing.
Gbo., gumbo.
G.I., gas injection.
Gr., gravity.
Gr. sd., gray sand.
Grn. sh., green shale.
Hd. sd., hard sand.
H.F.W., hole full of water.
I.P., initial production.
L., lime.
L.D.D., later drilled deeper.
Lnr., liner.
Loc., location.
M.I.M., moving in material.
M.I.R., moving in rig.
M.I.R.T., moving in rotary tools.
M.O.T., milling on tools.
O.I.H., oil in hole.
O.S., oil sand.
O.T.D., old total depth.
O.W.D.D., old well drilling deeper.
O.W.P.B., old well plugging back.
P.B., plugging or plugged back.
P.B.P., pulling big pipe.
P.L., pipe line.
P.L.O., pipe line oil.
Pmpg., pumping.
P.O.P., putting on pump.
P.P., pulled pipe.
Rd. sd., red sand.
Rd. sh., red shale.
Recmt., recemented.
Rmg., reaming.
Redrlg., redrilling.
Rng., running.
R.O.G., rig on ground.
R.P., rock pressure.
R.U., rigging up.
R.U.R., rigging up rotary.
R.U.R.T., rigging up rotary tools.
R.U.S.T., rigging up standard tools.
R.&T., rods and tubing.
S. or Sd., sand.
S.D., shut down.
Sd. sh., sandy shale.
Sdtr., or St., sidetracking.
S.D.P.L., shut down for pipe line.
S.D.W.O., shut down awaiting orders.
S.G., show gas.
Sh.&L., shale and lime.
S.I., shut in.
S.I.P., shut in, prorated.
S.L.M., steel line measurement.
S.O., show oil.
S.O.G.&W., show of oil, gas and water.
Spdg. or Spd., spudding.
S.R., straightreaming.
Stdg., standardizing (also standing).
S.W., salt water.
Swbg., swabbing.
T.A., temporarily abandoned.
Tbg., tubing.
T.D., total depth.
T.P., tubing pressure.
Tr., tract.
U.R., underreaming.
W.I.H., water in hole.
W.O., workover.
W.O.C. or W.O.C.S., waiting on cement to set.
W.P., working pressure.
W.S.O., water shutoff.
W.S.O.O.K., water shutoff O.K.
W.S.O.N.G., water shutoff no good.
W.S.R. or W.O.S.R., wait on standard rig.
Wtr., water.

Standard Oil Co., No. 72-19-J Kettleman North, Fresno	19-21-17	8,698	fishing
Standard Oil Co., No. 46-13-H Kettleman North, Fresno	13-21-16	3,755	sd. sh. drlg.
Standard Oil Co., No. 48-35-J Kettleman North, Kings	35-21-17	6,954	hd. sd. drlg.
Standard Oil Co., No. 46-19-V Kettleman Middle, Kings	19-23-19	5,544	cmtd. 5,439
Kettleman View Oil Co., Well No. 1, Kings Co.	29-22-19	3,601	gr. sd. drlg.
Milheim Oil Corp., No. 1 Tulare, Kings Co.	20-22-22	5,452	sd. sh. drlg.
Associated Oil Co., No. 1 Avenal, Kings Co.	33-23-17	2,587	hd. sh. drlg.
Foster, R. A., No. 1 Carriso, San Luis Obispo Co.	2-32-22	5,000	sd. sh. drlg.
United Oil Co., No. 2 Panorama, San Luis Obispo Co.	2-32-21	1,585	sd. sh. drlg.
Martin, J. D., No. 4 Pismo, San Luis Obispo Co.	5-32-13	3,002	sd. sh. drlg.
Martin, J. D., No. 5 Pismo, San Luis Obispo Co.	5-32-13	3,050	sd. sh. drlg.
Birch-Royer Oil Co., No. 1 Pismo, San Luis Obispo Co.	33-31-13	2,113	will cmt.
Crail Bros., No. 1 Pismo, San Luis Obispo Co.	8-32-13	3,331	sd. sh. drlg.
Barnsdall Oil, No. 1 Carriso Plains, San Luis Obispo	24-28-17	5,087	idle
Standard Oil Co., No. 3 McDonald Island, San Joaquin	31- 2-5	1,691	sd. sh. drlg.
Shell Oil Co., No. 1 Branch, Monterey Co.	34-24-10	8,994	P.B. 8,750
Shell Oil Co., No. 2 Branch, Monterey Co.	34-24-10	711	sd. sh. drlg.
Texas Co., No. 2 Eureka, Humboldt Co.	22- 3-1	4,428	reaming 1,865
Amerada Pet. Co., No. 2 Rio Vista, Solano Co.	26- 4-2	5,665	hd. sh. drlg.
Standard Oil Co., No. 2 Rio Vista, Solano Co.	27- 4-2	1,534	sd. sh. drlg.
Trico Oil & Gas Co., No. 1 Angiola, Tulare Co.	7-23-23	3,187	will P.B.
Associated Oil Co., No. 1 Sargent, San Benito Co.	5-12-4	3,900	fish. D.P.
Seaboard Oil Co., No. 1 Alameda, Alameda Co.	13- 3-3	2,951	bl. sh. drlg.

IMPORTANT WELLS AND SOUTHERN CALIFORNIA WILDCATS

Company, well and location—	S.T.R.	Depth	Status
Marvin, J. L., No. 1 El Segundo, Los Angeles Co.	7- 3-14	7,521	cleaning out
Richfield Oil Co., No. 1 El Segundo, Los Angeles Co.	18- 3-14	1,038	sd. sh. drlg.
Signal Finance, No. 1 Hawthorne, Los Angeles Co.	10- 3-14	7,790	sd. sh. drlg.
Marl Oil Co., No. 1 Torrance, Los Angeles Co.	35- 3-14	6,950	sd. sh. drlg.
C. C. M. Oil Co., No. 2 Torrance, Los Angeles Co.	31- 3-14	3,597	sd. sh. drlg.
Pongratz, Gus, No. 1 Torrance, Los Angeles Co.	8- 4-14	3,310	bailing
Shepard, Harry, No. 1 Torrance, Los Angeles Co.	6- 4-14	722	cmtd. 722
Black Gold Corp., No. 1 Torrance, Los Angeles Co.	6- 4-14	3,720	rig. to pump
Petrol Corp., No. 3 Torrance, Los Angeles Co.	6- 4-14	3,590	rig. to pump
Linderman Oil Co., No. 3 Torrance, Los Angeles Co.	31- 3-14	3,341	sd. sh. drlg.
M. W. Pet. Co., No. 1 Torrance, Los Angeles Co.	6- 4-14	2,780	sd. sh. drlg.
Walken Oil Co., No. 3 Torrance, Los Angeles Co.	5- 4-14	3,310	cleaning out
Shell Oil Co., No. 1 Kranz Torrance, Los Angeles Co.	5- 4-14	1,580	sd. sh. drlg.
Dumas-Lewis Oil Co., No. 2 Torrance, Los Angeles Co.	6- 4-14	3,450	sd. sh. drlg.
Collier, P. V., No. 1 Torrance, Los Angeles Co.	16- 4-14	3,781	to deepen
Emerald Oil Co., No. 1 Redondo, Los Angeles Co.	8- 4-14	3,791	cleaning out
Terry, George, No. 1 Redondo, Los Angeles Co.	8- 4-14	3,885	sd. sh. drlg.
Standard Oil Co., No. 80 Inglewood, Los Angeles Co.	8- 2-14	2,264	sd. sh. drlg.
Standard Oil Co., No. 24 Inglewood Rubel, Los Angeles	8- 2-14	....	bldg. rig
Shell Oil Co., No. 22 Inglewood, Los Angeles Co.	8- 2-14	3,270	flow. water
West American Oil Co., No. 1 Dominguez, Los Angeles	5- 4-13	9,370	sd. sh. drlg.
Crude Oil Drlg. Co., No. 1 Gardena, Los Angeles Co.	31- 3-13	3,851	sd. sh. drlg.
West American, No. 1 Gardena, Los Angeles Co.	5- 4-13	4,422	sd. sh. drlg.
Shell Oil Co., No. 84 Dominguez Reyes, Los Angeles Co.	33- 3-13	6,678	O.S. drlg.
Union Oil Co., No. 8 Dominguez Carson, Los Angeles	33- 3-13	7,306	cleaning out
Union Oil, No. 38 Dominguez Callender, Los Angeles	33- 3-13	7,393	P.B. 6,898
Union Oil, No. 47 Dominguez Callender, Los Angeles	33- 3-13	8,200	redrlg. 7,721
Union Oil, No. 49 Dominguez Callender, Los Angeles	33- 3-13	5,387	sd. sh. drlg.
Union Oil, No. 50 Dominguez Callender, Los Angeles	33- 3-13	3,953	sd. sh. drlg.
Republic Pet. Co., No. 1 Rosecrans, Los Angeles Co.	18- 3-13	6,141	P.B. 5,925
Associated Oil Co., No. 18 Seal Beach, Los Angeles Co.	11- 5-12	6,599	pump. 70 b.d.
Continental Oil Co., No. 39 Seal Beach, Los Angeles	11- 5-12	6,445	cmt. liner
Eastern Oil Co., No. 1 Del Rey, Los Angeles Co.	22- 2-15	7,428	P.B. 7,422
Rel Rey Drlg. Co., No. 1 Del Rey, Los Angeles Co.	27- 2-15	6,538	cmtd. 6,390
Union Oil Co., No. 23 Del Rey, Los Angeles Co.	27- 2-15	6,066	sd. sh. drlg.
Yant Pet. Corp., No. 1 Newhall, Los Angeles Co.	1- 3-16	2,412	milling
Holbrook Pet. Co., No. 1 Newhall, Los Angeles Co.	28- 4-16	2,900	sd. sh. drlg.
Barnsdall Oil Co., No. 1 Newhall, Los Angeles Co.	26- 4-17	3,250	sd. sh. drlg.
Sovereign Oil Corp., No. 1 Wilmington, Los Angeles	28- 4-12	3,689	will cmt.
Pan American, No. 1 Wilmington, Los Angeles Co.	20- 4-13	4,809	reaming
Bankline Oil Co., No. 1 Wilmington, Los Angeles Co.	34- 4-13	3,500	sd. sh. drlg.
General Pet. Corp., No. 1 Wilmington, Los Angeles Co.	4- 5-13	6,265	sd. sh. drlg.
Monarch Oil Corp., No. 1 Topango Canyon, Los Angeles	5- 1-16	1,568	sd. sh. drlg.
Wilshire Oil Co., No. 1 Montebello, Los Angeles Co.	5- 2-11	6,938	blow. gas
Woodward, J. A., No. 1 Montebello, Los Angeles Co.	4- 2-11	4,887	hd. sd. drlg.
Bush Oil Co., No. 1 Montebello, Los Angeles Co.	4- 2-11	2,275	sd. sh. drlg.
Standard Oil Co., No. 87 Montebello, Los Angeles Co.	1- 2-12	2,158	cmtd. 2,153
Standard Oil Co., No. 88 Montebello, Los Angeles Co.	2- 2-12	3,000	reaming
Universal Consd., No. 8 Montebello, Los Angeles Co.	5- 2-11	7,471	cmtd. 5,538
Universal Consd., No. 9 Montebello, Los Angeles Co.	5- 2-11	5,961	P.B. 5,900
Universal Consd., No. 10 Montebello, Los Angeles Co.	5- 2-11	4,752	sd. sh. drlg.
Universal-Richfield, No. 1-J Montebello, Los Angeles	6- 2-11	2,161	sd. sh. drlg.
Republic Petroleum Co., No. 1 Montebello, Los Angeles	6- 2-11	5,642	sd. sh. drlg.
Richfield Oil Co., No. 2 Montebello, Los Angeles Co.	5- 2-11	7,560	P.B. 6,980
Richfield Oil Co., No. 3 Montebello, Los Angeles Co.	5- 2-11	5,615	swabbing
Richfield Oil Co., No. 4 Montebello, Los Angeles Co.	6- 2-11	925	idle
St. Helens Pet. Co., No. 8 Montebello, Los Angeles Co.	5- 2-11	3,883	sd. sh. drlg.
St. Helens Pet. Co., No. 19 Montebello, Los Angeles Co.	2- 2-12	547	cmtd. 547
St. Helens Pet. Co., No. 20 Montebello, Los Angeles Co.	2- 2-12	2,680	sd. sh. drlg.
St. Helens Pet. Co., No. 21 Montebello, Los Angeles Co.	2- 2-12	3,072	sd. sh. drlg.
Texas Co., No. 14 Montebello, Los Angeles Co.	6- 2-11	5,365	recmtd. 5,365
Texas Co., No. 15 Montebello, Los Angeles Co.	6- 2-11	5,050	sd. sh. drlg.
Keystone Oil Co., No. 1 Pico, Los Angeles Co.	9- 2-11	4,612	P.B. 4,470
Hathaway, No. 3 Fulton, Santa Fe Spgs., Los Angeles	6- 3-11	4,733	redrlg. 4,460
General Pet., No. 46-D Santa Fe Springs, Los Angeles	6- 3-11	4,575	reaming
General Pet., No. 137-F Santa Fe Springs, Los Angeles	5- 3-11	4,945	rig. to pump
Ring Oil Co., No. 4 Santa Fe Springs, Los Angeles Co.	5- 3-11	4,908	reaming
Union Oil Co., No. 31 Santa Fe Springs, Los Angeles	6- 3-11	880	cmtd. 880
Union Oil Co., No. 33 Santa Fe Springs, Los Angeles	6- 3-11	4,076	pump. 110 b.d.
Union Oil Co., No. 34 Santa Fe Springs, Los Angeles	6- 3-11	2,291	sd. sh. drlg.
Union Oil Co., No. 100 Santa Fe Springs, Los Angeles	6- 3-11	4,161	sd. sh. drlg.
Union Oil Co., No. 102 Santa Fe Springs, Los Angeles	6- 3-11	....	rigging up
Vanda Petroleum, No. 1 Santa Fe Springs, Los Angeles	6- 3-11	7,420	sd. sh. drlg.
Bernstein, M. E., No. 1 Artesia, Los Angeles Co.	25- 3-12	5,888	redrlg. 5,872
Great Coastal Oil Co., No. 1 Elsinore, Riverside Co.	36- 5-5	2,930	sd. sh. drlg.
Associated Oil Co., No. 53 Huntington, Orange Co.	34- 5-11	4,380	pump. 70 b.d.
Associated Oil Co., No. 8 Huntington, Orange Co.	34- 5-11	4,630	fishing
Associated Oil Co., No. 2 Huntington, Orange Co.	34- 5-11	4,742	will deepen
Standard Oil Co., No. 12 Huntington, Orange Co.	12- 6-11	2,967	water witch
Dunlap & Crampton, No. 1 Huntington, Orange Co.	34- 5-11	3,982	pump. 221 b.d.
Lucky Strike Oil Co., No. 7 Huntington, Orange Co.	2- 6-11	1,146	sd. sh. drlg.
Huntington Signal Oil Co., No. 1 Huntington, Orange	34- 5-11	3,162	sd. sh. drlg.
Shell Oil Co., No. 19 Brea, Orange Co.	2- 3-10	4,420	fish. core bbl.
Armstrong, Babcock & Rowan, No. 1 E. Coyote, Orange	21- 3-9	....	material
West American Oil Co., No. 1 East Coyote, Orange Co.	24- 3-10	6,430	looks wet
Continental Oil Co., No. 1 East Coyote, Orange Co.	20- 3-9	2,570	sd. sh. drlg.
Union Oil Co., No. 29 Chapman Richfield, Orange Co.	30- 3-9	7,280	sd. sh. drlg.
Union Oil Co., No. 30 Chapman Richfield, Orange Co.	30- 3-9	4,398	will cmt.
Union Oil Co., No. 33 Chapman Richfield, Orange Co.	30- 3-9	4,440	sd. sh. drlg.
Union Oil Co., No. 34 Chapman Richfield, Orange Co.	30- 3-9	3,475	pump. 180 b.d.
Union Oil Co., No. 35 Chapman Richfield, Orange Co.	30- 3-9	3,040	sd. sh. drlg.
Calif. Eastern Oil Co., No. 1 Placentia, Orange Co.	31- 3-9	4,786	fish. D.P.
Melbourne Pet. Co., Well No. 1, San Bernardino Co.	12- 3-8	1,850	cmtd. 1,405
Equitable Pet. Co., No. 1 Wildcat, San Bernardino Co.	11-10-5	2,618	hd. sd. drlg.

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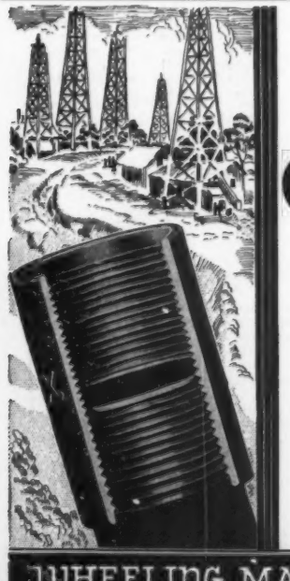

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Write to the Factory at Wheeling

WHEELING MACHINE PRODUCTS CO.
WHEELING, WEST VIRGINIA

KANSAS

Week Ending September 12 (Descriptions are East unless marked otherwise)

Barber County

Sinclair Prairie Oil Co. No. 1 Gentry, NE cor. sec. 1-33-15w. Topeka 3,320 ft.; K. C. 4,212 ft.; drlg. 4,240 ft.

Barton County

Armer & Vernon O. & G. Co. No. 1 Ainsworth, NE NE SE sec. 33-16-13w. M.I.M.

F. E. Bailey et al No. 1 Hammeke, NE NE SW sec. 12-18-12w. Set 20-in. pipe 40 ft.; S.D. 315 ft.

J. A. Brouk et al No. 1 Keil, SE SE NE sec. 11-16-15w. Siliceous 3,408 ft.; P.B. to 3,418 ft.; D.&A.

John Burton No. 1 Wendel, NE cor. sec. 13-19-11w. S.D. 555 ft.

C. L. Price No. 1 Deutsch, NW NW NE sec. 16-16-13w. S.D. 3,125 ft.

G. H. Rose and W. H. Lant No. 1 Redetzke, NE NW NW sec. 1-16-11w. Ran 6-in. csg.; 2,878 ft.; K.C. 3,020 ft.; S.O. 3,030-35 ft. and 3,095-3,101 ft.; drlg. 3,175 ft.; 800 ft. oil in hole.

Yarnell & Carlson No. 1 Roth, NE cor. sec. 35-18-12w. Anhydrite 660 ft.; set 12-in. csg. 663 ft.; drlg. 1,135 ft.

Butler County

Dalton et al No. 1 Miley, C SW NE sec. 17-27-5. S.D. 350 ft.

Ed Solomon No. 1 Church, SW NE SE sec. 8-28-5. Drlg. 100 ft.

Chase County

Propp et al No. 1 Fromm, SE cor. sec. 20-18-9e. Drlg. 1,890 ft.

Clark County

Olson & Watchorn No. 1 Morrison, C SE SW sec. 17-32-21w. K.C. 4,390 ft.; Miss. 5,351 ft.; M.I. Rot. 5,395 ft.

Decatur County

Winkler & Koch No. 1 Vessey, C NW SE sec. 26-3-26w. R.U.R.

Edwards County

Royal Pet. Co. et al No. 1 Krupp, NW NW SE sec. 18-24-19w. Bldg. rotary rig.

Skelly Oil Co. et al No. 1 Kipp, C SE SE NE sec. 27-25-14w. Cellar.

Stanolind O. & G. Co. et al No. 1 Donovan, C SE SE sec. 14-26-18w. Fsg. 4,570 ft.

Ellis County

Bradley Oil Co. et al No. 1 Penney-Wann. SE cor. sec. 13-15-20w. Cmtd. back to 3,340 ft.; drlg. core 3,605-15 ft.; rec. 9 inches.

Bridgeport Mch. Co. No. 1 Ubert, NE NE NW sec. 12-13-18w. Topeka 3,060 ft.; Oswald 3,370 ft.; S.O. 3,375 ft.; H.F.W. 3,423-28 ft.; U.R. 6-in. 3,435 ft.

Empire O. & R. Co. No. 1 Samuelson, NE NE SE sec. 31-11-16w. 10-in. csg. 2,491 ft.; 8-in. csg. 2,913 ft.; C.O.

Champlin Refining Co. No. 1 Hadley, SE SW NE sec. 30-11-17w. Anhy. 1,356 ft.; drlg. 3,205 ft.

Glick & Morrow No. 1 Staah, SW SW SE sec. 6-13-17w. R.U.R.

Frank Hamilton et al No. 1 Sack, NW NW SE sec. 26-13-19w. 8-in. 1,218 ft.; Topeka 3,174 ft.; Oswald 3,450 ft.; R.U. S.T. 3,470 ft.

Jones & Shelbourne No. 1 Gunther, SE SE SW sec. 9-11-19w. Oswald 3,320 ft.; S.O and G. 3,475-80 ft.; fsg. 3,507 ft.

Kansas Dev. Corp. No. 1 Haller, SE SE NW sec. 10-11-18w. Anhydrite 1,190 ft.; Topeka 2,915 ft. (cor.); T.D. 3,050 ft.; acidized; potential prod. 531 bbls. oil in 24 hrs.

Ted Kors et al No. 1 Koblitz, SE SW NW sec. 23-12-18w. Set 15-in. csg. 687 ft.; drlg. 790 ft.

Lario O. & G. Co. et al No. 1 Cress, NE cor. sec. 13-11-17w. W.O.C. 346 ft.

Lario O. & G. Co. No. 1 Marshall, NW SE NE sec. 36-11-18w. T.D. 1,371 ft.; skidded rig 75 ft. S; set 15-in. csg. 622 ft.; drlg. 1,073 ft.

Murphy Oil Co. No. 1 Wiesner, SE SE SW sec. 12-14-19w. R.U.

Simar Oil Co. et al No. 1 Leiker, NW NW

SE sec. 12-15-18w. Anhy. 1,150 ft.; drlg. 2,175 ft.

Taylor et al No. 1 Emery, NE NE NE sec. 23-14-18w. R.U.

Vickers Pet. Co. No. 1 Kraus, SW SW NW sec. 22-14-19w. Anhy. 1,390 ft.; Oswald 3,420 ft.; Siliceous 3,735 ft.; sand 3-737-40 ft.; T.D.; pot. prod. 259 bbls. in 24 hrs., down 4 hrs.

Winkler & Koch No. 1 Jensen, SW SW NE sec. 3-13-18w. Cellar.

Ralph Wixson et al No. 1 Gorham Estate, NW NW SW sec. 35-15-16w. Anhy. 960 ft.; drlg. 990 ft.

Wolf Creek Oil Co. et al No. 1 Polifka, SW SW NE sec. 24-13-18w. Set 10-in. csg. 2,010 ft.; H.F.W. 2,703-11 ft.; U.R. 10-in. csg.

Ellsworth County

Empire O. & R. Co. No. 1 Kunkle, SE SW SE sec. 16-15-8w. Set 12-in. csg. 300 ft.; drlg 1,980 ft.

Finney County

Helmerich & Payne No. 1 Jones, C SE sec. 34-26-24w. T.D. 2,764 ft.; 3,250,000 ft. gas; acidized.

Graham County

Sam Murphy and J. S. Alcorn No. 1 Wamhoff, C NW sec. 27-10-22w. Rot. rlg.

Noah & Young No. 1 Hills, NW SE SE sec. 19-10-21w. Set 13-in. csg. 1,168 ft.; S.D. 1,295 ft.

Grant County

Columbian Fuel Co. No. 1 Gray, C SE sec. 3-29-35w. Set 8-in. csg. 2,500 ft.; drlg. cmt.

Greenwood County

Guy Scott et al No. 1 Pedroja, SE NE SE sec. 6-26-10. Peru sd. 1,675-1,720 ft.; S.O.; fsg. 2,130 ft.

Harvey County

Harburney Oil Co. No. 1 Schrag, NW NW SE sec. 24-22-3w. Set 10-in. csg. 3,062 ft.; T.D. 3,110 ft.; S.D.; S.O. and G.

Haskell County

Helmerich & Payne et al No. 1 Larson, C SE sec. 28-28-33w. Rig.

Kearney County

J. L. Murphy No. 1 Campbell, NW NW SW sec. 32-25-35w. M.I.M.

Kingman County

W. C. McBride, Inc., No. 2-A Wooldridge. SW NE SE sec. 16-27-7w. K.C. L. 3,173 ft.; H.F.W. 3,320-30 ft.; set 8-in. csg. to 3,444 ft.; S.O. 3,495 ft.; S.D. 3,586 ft.

D. R. Lauck et al No. 1 Skilling, C E½ E½ SW sec. 3-27-8w. O.W.D.D.; drlg. 4,583 ft.

Lincoln County

Graham et al No. 1 Smiley, NE NW NW sec. 26-10-9w. R.U.R.

Lyon County

Becker Bros. No. 1 Rossillion, SE SE NE sec. 19-21-11. K.C. 2,208 ft.

Marion County

Barbara Oil Co. No. 1 Hane, NE NE SW sec. 4-18-5. Wilcox 2,525-42 ft.; Siliceous 2,621-27 ft.; T.D.; D.&A.

Empire Oil & Ref. Co. No. 1 Schmidt, NW NW SE sec. 31-20-2. Chat 2,699 ft.; 8-in. 2,812 ft. drlg. 2,820 ft.

McPherson County

Hawkins et al No. 1 Ritikofer, NE NE SE sec. 2-20-1w. K.C. L. 2,335 ft.; Chat 2,910 ft.; H.F.W. 2,957-77 ft.; U.R. 8-in. csg. 3,005 ft.

Ness County

Continental Oil Co. No. 1 Thompson, C E½ E½ SW sec. 13-18-26w. Siliceous and S.O. 4,446-50 ft.; T.D. 4,527 ft.; water; P.B. 4,492 ft.; acidized; pot. 684 bbls. oil; comp.

Newton Dev. Co. No. 1 Tenny, NW NW SE sec. 19-18-25w. Anhy. 1,185 ft.; 12-in. csg. 1,198 ft.; C.O.

Sayre Oil Co. et al No. 1 Ryersee, C NE SE sec. 34-18-21w. Drlg. 2,100 ft.

Pawnee County

Kessler & Thier et al No. 1 Gustafson, SW cor. sec. 27-20-16w. Siliceous 3,809 ft.; sulfur wtr. 3,839-49 ft.; T.D. 4,140 ft.; D.&A.

Simpson Oil Co. et al No. 1 Gates, SW cor. sec. 13-20-16w. Siliceous 3,815 ft.; cmtd. 7-in. csg. 3,819 ft.; T.D. 3,841 ft.; pot. 187 bbls. in 24 hrs.; gas est. 5,000,000 ft.

Pratt County

H. V. Elwell et al No. 1 Fay, NW NW SE sec. 15-27-14w. Drlg. 1,235 ft.

Indian Territory Illum. Oil Co. and Olson Drlg. Co. No. 1 Bolt. C NW NE sec 5-29-11w. Topeka 3,160 ft.; K.C. 3,748 ft.; set 8-in. csg. 3,756 ft.; R.U.S.T.

Reno County

Continental Oil Co. and L. H. Wentz No. 1 Snook, NE NW SW sec. 10-22-8w. Siliceous 3,564 ft.; T.D. 3,728 ft.; P.B. to 3,200 ft.; drilled to 3,205 ft.; acidized.

Foraker et al No. 1 Hiett, SE SW NE sec. 34-24-4w. Set 5-in. lnr. 3,385 ft.; Chat 3,420 ft.; S.D. 3,540 ft.

Graham et al No. 1 Miller, NE NE SE sec. 36-25-10w. Siliceous 4,333-62 ft.; T.D. showing sulfur wtr.

Miller et al No. 1 Detter, NE SE NW sec. 28-22-7w. S.D. 2,849 ft.

Page et al No. 1 Mueller, C S½ SW NE sec. 25-24-5w. Chat 3,357 ft.; set 7-in. 3,369 ft.; R.U.S.T.

Fred Phillips No. 1 Bay, SW SW SW sec. 7-23-8w. Set 13-in. csg. 200 ft.; drlg. 2,160 ft.

Pryor & Lockhart et al No. 1 Kerr, C NW sec. 23-23-8w. 8-in. csg. 2,665 ft.; drlg. 3,000 ft.

Clyde Pulse et al No. 1 Payne, SW NW NE sec. 4-22-7w. M.I.M.

Fred Rust No. 1 Schumacher, SE SE SW sec. 29-22-8w. Set 12-in. csg. 201 ft.; S.D. 980 ft.

H. F. Thomas et al No. 1 Greenwood, NE NE NE sec. 6-23-9w. 12-in. csg. 286 ft.; Simpson 3,825 ft.; Siliceous 3,885 ft.; T.D. 3,900 ft.; S.D.O.

Rice County

Allison & Fitzwilliam et al No. 1 Foby. NW SW NW sec. 17-19-7w. 15-in. csg. 371 ft.; S.D. 1,110 ft. for csg.

Buckley No. 1 Bailey, SW SW NW sec. 19-20-6w. B.R.

Charles Petroleum Corp. No. 1 Speck, NW NW SE sec. 29-20-8w. Spudded and S.D.

Gulf Oil Corp. No. 1 Steckel, SW cor. sec. 30-19-10w. Set 10-in. csg. 150 ft.

Saco Oil Co. et al No. 1 Haxton Est., NW NW NE sec. 30-19-8w. Set 6-in. csg. to 3,286 ft.

Sage et al No. 1 Patton, SW cor. sec 5-21-7. 8-in. csg. 2,875 ft.; K.C. 2,898 ft.; drlg. 3,125 ft.

Shell Pet. Corp. No. 1 Gordon, C W half W half NE sec. 21-21-10w. Siliceous 3,435 ft.; cg.

Shell Pet. Corp. et al No. 1 Hafermann, C N½ N½ SE sec. 6-19-9w. Siliceous 3,193 ft.; T.D. 3,216 ft.; pumped 937 bbls. in 17¾ hrs.

Shell Pet. Corp. No. 1 Maughlin, NE NW SE sec. 11-20-8w. Siliceous 3,235-38 ft.; 36,500,000 ft. gas at 3,260 ft.; acidized.

John Stark et al No. 1 Doran, NE NE SE sec. 13-19-10w. 15-in. 117 ft.; 12-in. 425 ft.; 10-in. 1,700 ft.; 8-in. 2,200 ft.

W. E. Witt et al No. 1 Wright, NW NW SE sec. 26-19-9w. R.U.

Rooks County

Hartman & Blair et al No. 1 Hall, NW cor. sec. 25-10-17w. Ran 5-in. csg. to 3,601 ft.; Simpson 3,712-16 ft.; H.F.W.; Siliceous 3,717-50 ft.; inc. wtr.

L. C. D. Drlg. Co. et al No. 1 Westhusin, C NE SE sec. 11-9-17w. C.O. 2,420 ft.

J. H. Lester No. 1 Methene, SE SE NE sec. 29-10-20w. Topeka 3,250 ft.; fsg. 3,366 ft.

J. A. Shoemake No. 1 Stebbins, NE NE SW sec. 26-7-17w. U.R. 6-in. csg. to 3,521 ft.; T.D. 3,591 ft.; P.B. to 2,977 ft.

Rush County

C. L. Sheedy No. 1 Bison, SW cor. sec. 25-16-17w. R.U.

Russell County

Armer et al No. 1 Maier, NE NW NE sec. 20-15-14w. Topeka 2,750 ft.; set 6-in. csg. 2,935 ft.; C.O.

Braden & McClure No. 1 Herbel, NE NE NW sec. 35-14-14w. Anhy. 745 ft.; Oswald 2,918 ft.; S.O. 3,005-08 ft. and 3,012-20 ft.; drlg. 3,102 ft.

Coralena Oil Co. No. 1 L. A. Sellens, NW cor. sec. 17-15-13w. Drlg. 2,265 ft.

El Dorado Ref. Co. No. 1 Scott, NW NW NE sec. 17-13-13w. S.D. 835 ft.

Hartman & Blair No. 1 Johnston, NW cor. sec. 11-13-14w. H.F.W. 3,133-34 ft.; D.&A.

R. C. Tarrant No. 1 Williamson, SE SE NW sec. 9-14-14w. Tarkio L. 2,515 ft.; T.D. 2,550 ft.; swabbed 5 B.P.H. and showing of wtr.; acidized with 1,000 gals.; made potential of 243 bbls. of oil.

Saline County

Brouk et al No. 1 Othelander, NE NW SE sec. 10-16-3w. Fsg. 1,445 ft.; to skid rig.

Ryan Consolidated Co. & Archer No. 1 Norton, NE cor. sec. 32-14-2w. Set 8-in. 2,917 ft.; drlg. 3,350 ft.

Sedgwick County

D. R. Lauck No. 1 McLean, SW SW SE sec. 1-27-1w. Siliceous 3,613 ft.; drlg. 3,-933 ft.

Earl Wakefield et al No. 1 Howard, SE SE NE sec. 25-25-2. Chat 2,770 ft.; Viola 3,157 ft.; drlg. 3,195 ft.

R. J. Wallace et al No. 1 Scheer, SW cor sec. 22-27-3w. K.C. 2,779 ft.; drlg. 3,075 ft.

Sheridan County

O. A. Roberts et al No. 1 Carrick, C NW sec. 34-9-27w. Rotary rig.

Stafford County

Indian Terr. Illum. Oil Co. and Empire O. & R. Co. No. 1 Mellies, C N½ N½ NE sec. 6-22-11w. 10-in. 2,129 ft.; drlg. 2,423 ft.

Skelly Oil Co. et al No. 1 Kipp, SE SE NE sec. 27-25-14w. Drlg. 2,493 ft.

C. E. Skiles No. 1 Leidigh, NW NW SW sec. 21-22-11w. Rig.

Stanolind Oil & Gas Co. No. 1 Evans, NW NW SW sec. 3-23-11w. K.C. 3,277 ft.; Siliceous 3,703-75 ft.; D.&A.

C. H. Lebow et al No. 1 Wolk, SE SW NW sec. 3-21-12w. S.D. 2,335 ft.

Sumner County

S. J. Buffington No. 1 Payne, C SW NE sec. 10-35-2e. S.D. 1,025 ft.

Empire O. & R. Co. No. 1 Hoffman, NW NW SW sec. 27-34-1e. Loc.

Matthews & Derrington No. 1 Berry, NW NW SE sec. 14-35-1. Big L. 3,712 ft.; Simpson 3,753 ft.; S.D. 3,780 ft.

Pryor & Lockhart No. 1 McCowen, NE NE SW sec. 18-32-1w. K.C. L. 3,102-3,-355 ft.; Chat 3,741 ft., S.L.M.; drlg. 3,815 ft.

Rose Spring Drlg. Co. et al No. 1-A Rutter, C NW NW sec. 21-33-2e. Spudded.

Texas Co. No. 1 Reed, NE SE SE sec. 11-31-1w. Drlg. 4,027 ft.

Trego County

Central Commercial No. 1 Wagg, NW NW SE sec. 17-13-21w. K.C. L. 3,548 ft.; granite 4,562-62 ft.; T.D.; P.B. 3,864 ft.; swbd. 7 bbls. oil per day; 1,800 ft. oil and 200 ft. wtr. in hole.

J. J. Hall et al No. 1 Deines, SE SE SE sec. 12-13-24w. Cong. 4,391 ft.; U.R. 6-in. csg. to 4,404 ft.

R. B. McNeely et al No. 1 Lemke, NW NW SW sec. 7-11-22w. Set 7-in. csg. 3,490 ft.; H.F.W. 3,490-94 ft.; T.D. 3,-646 ft.

G. M. Piggott, Inc. et al No. 1 Burkett, C SW sec. 15-11-22w. Oswald 3,452 ft.; set 8-in. csg. 3,460 ft.; R.U.S.T.

York State Oil Corp. No. 1 Gugler, SW cor. sec. 36-12-21w. Topeka 3,120 ft.; S.O. 2,240-50 ft.; Oswald 3,405 ft.; fsg. 3,421 ft.

Woodson County

N. C. Dunn No. 1 Dawson, C NW NE sec. 27-26-13. L. 1,505 ft.; T.D. 1,527 ft.; P.B. 1,200 ft.; H.F.O.; no test.

Holmes et al No. 1 Holmes, SE NE NE sec. 25-25-14e. R.U.M.

Ladd et al No. 1 Lauber, NW cor. sec. 4-25-14e. Drlg. 355 ft.

Lewis et al No. 1 Riggs, SW cor. sec. 10-26-14. Fsg. 1,250 ft.

C. L. Sheedy et al No. 1 Fuhlhage, NE NW SW sec. 27-25-14. Set 6-in. csg. 1,431 ft.

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OKLAHOMA

Week Ending September 12

NORTHERN OKLAHOMA

Beckham County

Mid-American Oil Co. No. 1 Biscoe, SW SW SW sec. 28-8-22w Drlg. 820 ft.

Caddo County

Wasteka Oil Co. No. 1 Griffin, SW SE NE sec. 27-6-10w. Drlg. 6,493 ft.

Cleveland County

Hall-Briscoe, Inc., No. 1 Fant, SW SW NE sec. 27-10-2w. S.D. at 7,511 ft.

H. R. Hollenbeck No. 1 Stinson, NW NW NE sec. 17-9-2w. Rig on ground.

Coal County

Carter Oil Co. et al No. 1 Warne, NE NE NW sec. 31-3-9. Drlg. 1,025 ft.

Continental Oil Co. No. 1 Breedlove, NW SW SW sec. 24-1-8. Drlg. 1,970 ft.

Continental Oil Co. No. 1 King, NE SW NE sec. 26-1-8. Sd. 790-820 ft.; T.D. 3,-779 ft.; S.D. for wtr.

Continental Oil Co. No. 1 W. Kirby, SW SE SW sec. 23-1-8. Drlg. 1,235 ft.

H. W. Lee et al No. 1 Harton, C NE NE NE sec. 9-6-13w. T.D. 2,001 ft.; S.D.

M. C. Mitchell No. 1 Quiett, NE NW SW sec. 35-1-8. Wapanucka 1,550 ft.; T.D. 1,900 ft.; shot collapsed 38 ft. of pipe; tools stuck 1,551 ft.

Sinclair Prairie Oil Co. No. 1 Culver, NE NE SW sec. 16-1-8. Hunton at 4,615 ft.; drlg. 4,745 ft.

Garfield County

Herndon Drlg. Co. et al, No. 1 Branson, SW SW SE sec. 23-24-3w. Drlg. 4,780 ft.

Ellison & Hammond No. 1 Selby, C SE NW sec. 24-2-3w. M.I.M.

B. F. Lundy No. 1 Prince, NE NE SE sec. 21-1-2w. T.D. 2,552 ft.; S.D.

C. A. Luttrell et al No. 1 Howell, NW SE NW sec. 34-1-1. T.D. 160 ft.; S.D.

Ohio Oil Co. No. 1 Smythe, NE NE SW sec. 23-22-4w. (Wilcox sd. test); moving in rotary; cd. oily sds. and sh. 3,532-58 ft.

Grady County

John Graham et al No. 1 Castleberry SW SE NW sec. 8-5-7w. Sd. 1,900-06 ft.; showing oil and gas; bailed dry; T.D. 1,906 ft.; S.D.O.

Ray Stevens No. 1 Mays, NE cor. sec. 1-3-8w. Drlg. 4,450 ft. in sdy. sh.

Tide Water Oil Co. No. 1 Sturtevant, NE cor. NW sec. 28-4-1e. Loc.

Hughes County

McAdams & Barnes No. 1 Koch, SW NE NE sec. 1-9-10. Hunton 3,810 ft.; fsg. 3,835 ft.

McAdams & Barnes No. 1 Long, SE NE NW sec. 29-9-9. Drlg. 3,130 ft.

Sinclair Prairie Oil Co. et al No. 1 Wilkly, SW cor. sec. 28-9-8. Calvin 1,505 ft.; Cromwell 3,508 ft.; T.D. 3,549 ft.

Sivalls et al No. 1 Montgomery, NW SW NW sec. 7-9-9. T.D. 3,498 ft.; S.D. for wtr.

Southern Oil Co. No. 1 Buck, C NW SW SW sec. 21-8-10. R.U.S.T.

Kay County

W. O. Allen No. 1 Fulton, SE cor. sec. 18-27-4. Sd. 2,186-2,320 ft.; H.F.W.; drlg. 2,368 ft.

Denver Prod. & Ref. Co. No. 1 School, SE NW NE sec. 13-26-1w. Drlg. 4,011 ft.

Max Kelley No. 1 Johns, NW NW NW sec. 35-27-4. R.U.S.T.

Robert Wilson et al No. 1 Dickerson, NE NE SW sec. 20-29-1w. T.D. 2,280 ft.; lowering 10-in. csg.

Kiowa County

Argus Pet. Co. No. 1 Osbourne, NW cor. NE sec. 9-7-16w. T.D. 587 ft.; lost hole; skidded machine; drlg. 415 ft.

R. O. Houlbelt No. 1 Pfenning, SE NW SE sec. 35-7-17w. Machine.

Lykins et al No. 1-A Aetna Life, SE cor. sec. 8-5-16w. Drlg. 400 ft.

Pendleton & Vaughn No. 2 R. E. Hobb, C E½ NW SW sec. 7-6-16w. T.D. 425 ft.; W.O.C.

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for 2-inch tubing

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Furnished either with Sand Trap or with 2 Cup Standing Valve and Garbutt Rod.

Save, with the New "MAC"!

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WORKING BARREL COMPANY

Bradford, Pa., U.S.A.

Pendleton & Vaughn No. 2 Smart, SE NW SE sec. 12-6-17w. R.U.M.

Rush C. Roberts No. 1 Funkhouser, SE cor. NW NW sec. 25-7-17w. Drlg. 125 ft.

Travis & Scott No. 1 Doyle, NE SE SW sec. 21-5-17w. T.D. 910 ft.; S.D.

Le Flore County

McCraw et al No. 1 Tidwell, C NW SE sec. 17-3-32. Pull 10-in. csg.; T.D. 1,900 ft.; set 10-in. csg.; S.D. for wtr.

Lincoln County

Skelly Oil Co. No. 1 Sporn, NW NE SW sec. 21-17-3. T.D. 4,550 ft.; R.U.S.T.

Logan County

Helmerich & Payne et al No. 1 Hasler, NW NW SE sec. 14-16-4w. Rig.

McIntosh County

Stanolind Oil & Gas Co. et al No. 1 Tiger, NW NW SW sec. 13-9-15. Bldg. rig.

Noble County

Stanolind O. & G. Co. and Amerada Pet. Corp. No. 1 Gillham, NE SE SE sec. 14-23-1. First Wilcox 4,636-51 ft.; second Wilcox 4,656-69 ft.; P.B. 4,651 ft.; T.D. 4,669 ft.; drld. plug; 4,000 ft. wtr. in hole; S.D.

Osage County

Chavalier & Simon No. 1 Osage, SE cor. sec. 24-23-9. R.U. and S.D. for wtr.

Pittsburg County

Okla. Dist. Oil Co. No. 1 Beeler, NE NE SW sec. 7-7-14. T.D. 2,904 ft.; drill pipe in hole; cmtd. crevice with 300 sacks; W.O.C.

Pottawatomie County

Carter Oil Co. No. 1 Warne, NE NE NW sec. 31-3-9. Digging cellar.

J. L. Shaw No. 1 Illinois Life, NW SE NW sec. 1-4-5. Drlg. 1,590 ft.

Seminole County

Feimlee & Nichaelson No. 1 Belford, SE NW NE sec. 15-9-8. Sd. 1,460-1,505 ft.; S.O.&G.; S.D. 1,680 ft.

H. E. Kennedy No. 1 Bowlegs, NW NW SE sec. 3-9-7. Loc.

Tom Phillips and Kimrow Drlg. Co. No. 1 Cheparney, SE SE NW sec. 7-6-7. T.D. 4,085 ft.; swabbed 20 bbls. wtr. per hour; cmtd. and waiting.

Texas County

Allison & Barnhill No. 1 Bingley, SE SE NE sec. 30-2n-18. (Cimmaron Meridian) T.D. 830 ft.; S.D.

SOUTHERN OKLAHOMA

Carter County

Carter Oil Co. et al No. 1 Leon Voorhees, C SE SW sec. 34-5s-2w. T.D. 8,625 ft.; lost circulation.

W. E. Hammond No. 1 J. Lile, SW cor. SE SE sec. 8-5s-1e. T.D. 553 ft.; (correction).

Texas Co. et al No. 1-B Cathey, SE NE NE sec. 6-5s-1w, O.W.D.D.; sd. 4,354-55 ft.; swbd. 330 bbls. in 15 hrs.; drlg. 4,505 ft.

Cotton County

Phillips Pet. Co. No. 1 Warren, C NE NE SE sec. 1-5s-13w. Rmg. to set 16-in. csg.; T.D. 1,857 ft.; moving in standard tools.

Garvin County

Ellison & Hammond No. 1 Selby, C SE NW sec. 24-2n-3w. R.U.R.

Tide Water Oil Co. et al No. 1 Sturtevant, NE NE NW sec. 28-4-1e. R.U.R.

Harmon County

Lloalko Trust, Ltd., No. 1 Crosnoe, SE SE SW sec. 14-3n-25w. T.D. 2,870 ft., S.D. for D.P.

Jackson County

C. P. Burnham No. 1 Oliver, NW NW SE sec. 26-1-20w. T.D. 2,368 ft.; mudded hole and S.D.

A. H. Jackson No. 1 fee, SE cor. SW SW SW sec. 27-1s-24w. Drlg. 2,591 ft.

Jefferson County

A. T. Campbell No. 1 Trout, SE NE NE sec. 4-8s-7w. Sd. 1,535-57 ft.; T. D. 2,212 ft.; set 5 3/16-in. csg.

Mid-Continental Oil Co. No. 1 Reid, C SW NW sec. 32-6s-4w. Loc.

Pearson et al No. 1 Douthitt, NE cor. sec. 24-6s-9w. T.D. 3,280 ft.; (correction); W.O.C.

Johnston County

Equitable O. & G. Co. No. 1 Bellsey, NE SW sec. 12-2s-4e. Arbuckle L. 1,553 ft. drlg. 1,938 ft. in L.

Love County

Amerada Pet. Corp. No. 1-A Westheimer & Daube, SW SE SW sec. 27-6s-2e. T.D. 7,363 ft.; P.B. 2,970 ft.; perforated csg. at 1,539-99 ft. and 2,095-2,115 ft.; cmtd. perf.; flwd. 22 bbls. in 24 hrs. and "went dead"; S.D.O. Aug. 4; will open.

W. H. Riddle et al No. 1 Johnson, C SW SE cor. sec. 20-8s-2w. T.D. 4,009 ft.; S.D.O.

Sinclair Prairie Oil Co. No. 1 Stockton SE SE SW sec. 26-6s-2w. T.D. 8,583 ft.; shot 8,545-76 ft.; swbd. 247 bbls. first 24 hrs.; 190 bbls. second 24 hrs.; had not recovered oil load.

Marshall County

Helmrich & Payne No. 1 Taliaferro, NW SE SW sec. 26-5s-5e. Drlg. 5,352 ft.

Murray County

Hornsby & Jones No. 1 Sadler, NE NE NW sec. 20-1n-2e. Drlg. 2,458 ft.

Power Oil Co. No. 1, C SW NE sec. 16-1s-2e. Set 10-in. csg. 252 ft.; drlg. 1,050 ft.

Stephens County

W. G. Endicott et al No. 1 McFatridge, NW NW SW sec. 11-2s-9w. T.D. 1,515 ft. S.D.

T. H. McCasland et al No. 1 Hildebrand, SW SE NE sec. 1-3s-7w. Arbuckle 4,360 ft.; T.D. 4,601 ft.; to make Schlumberger survey.

Tillman County

Beal & Toler No. 1 Magill, SE SE SE sec. 18-1n-16w. T.D. 250 ft.; S.D. for csg.

Rochelle Bernheimer No. 1 Tate, NE NE NW sec. 16-1s-19w. T.D. 2,872 ft.; reaming.

Gulf Oil Corp. No. 1 Wearmouth, SE NW SE sec. 31-1s-18w. T.D. 5,127 ft.; P.B. to 4,557 ft.; tstd. wtr. at 4,531-57 ft.; cmtd. back to 4,532 ft.; D.&A.

Johnson, Young & Mitchell No. 1 Donahoe, SW NW NW sec. 7-4s-17w. T.D. 3,200 ft.; S.D.; contract depth.

Lynn Oliver No. 1 Rilling, SE SE NW sec. 22-1s-15w. Granite Wash 775 ft. T.D. 1,000 ft.; S.D.O.

D. S. Smith No. 1-A Hammill, NE NE NW NW sec. 6-5s-15w. T.D. 2,425 ft.; caught fish; pulling drlg. pipe.

Snowden & Anding No. 2 Taylor, Lot 7, Blk. 46, sec. 23-23-16. Drlg. 3,770 ft.

Standard Oil Co. No. 7 J. Caldwell, 610 ft. N, 660 ft. W, SE sec. 23-23-16. Comp., flowing 130 B.P.H., 1¾-in. tbg. choke; T.D. 6,046 ft.

United Gas No. 7 Brewer Unit, SW cor. sec. 22-23-16. Drlg. 1,750 ft.

United Gas No. 2 fee 574, SW SE sec. 16-23-16. Drlg. 4,895 ft.

United Gas No. 3 fee 574, NE SE sec. 16-23-16. Drlg. 500 ft.

United No. 2 Gibson, NE SE NW sec. 15-23-16. Drlg. 4,949 ft.

United Gas No. 2 L. Gibson est., sec. 15-23-16. Drlg. 4,870 ft.

United Gas No. 3 L. Gibson est., sec. 15-23-16. Drlg. 5,605 ft.

United Gas No. 10 M. L. Pitts, SE SW SW sec. 13-23-16. Drlg. 5,422 ft.

United Gas No. 3 W. B. Spearman, SW cor. sec. 15-23-16. Drlg. 4,924 ft.

United Gas No. 4 W. B. Spearman, NE SW sec. 22-23-16. Drlg. 4,871 ft.

United Gas No. 5 N. S. Spearman Unit, SW cor. sec. 7-23-15. Drlg. 5,595 ft.

United Gas No. 9 Thomas Unit, 330 ft. N and 322 ft. W, SE cor. NE NW sec. 23-23-16. rng. 7-in. csg.; T.D. 6,015 ft.

United Gas No. 4 J. L. Young, NE cor. sec. 28-23-16. Drlg. 5,269 ft.

R. J. Wolfe No. 1 R. G. Fitts, 330 ft. N line, 132 ft. E line, SW cor. SE NE sec. 8-23-15. Drlg. 4,025 ft.

R. J. Wolfe No. 2 R. G. Fitts, 330 ft. S, 132 ft. E, NW cor. SE NE sec. 8-23-15. Location.

N. LOUISIANA WILDCATS

Bienville Parish

W. V. Bowles et al No. 1 Bank of Ringgold, sec. 3-15-9. Drlg. 3,500 ft.

DeSoto O. & G. Co. No. 1 Dunn and Olsen, C N½ NW¼ sec. 15-16-10. R.U.

J. W. Leonard No. 1 Courtney, 330 ft. N and W, SE cor. sec. 5-17-7w. Drlg. 6,211 ft.

Rondeau et al No. 1 Locke, NE cor. sec. 19-15-10. R.U.

Bossier Parish

Ark-La Gas Co. No. 1 J. G. McDade, NW cor. sec. 8-17-11. R.U.

Geo. H. Bringhurst et al No. 2 Buckley, 1,000 ft. N, 330 ft. W, SE cor. sec. 35-21-13. Drlg. 1,854 ft.

Tidwell et al No. 1 Nattin, 200 ft. S and W, C sec. 15-22-14. Hole clean; S.D.; T.D. 2,954 ft.

Triangle Drlg. Co. No. 1-E Skannal, 660 ft. N and 2,640 ft. W, SE cor. sec. 28-17-12. 7-in. csg. cmt. 5,560 ft.; T.D. 5,697 ft. W.O.C.S.

United Gas No. 1 Roos, NW cor. sec. 23-17-12. Drlg. 350 ft.

United Gas No. 1-F H. L. Skannal, 660 ft. S, 2,640 ft. W, NE cor. sec. 26-17-12. Drlg. 3,255 ft.

Caddo Parish

Calatex O. & G. Co. No. 2 Scott, 1,038 ft. W, 807 ft. N, SE cor. sec. 5-16-16. P.B. to 2,460 ft.; W.O.C.S.

Calatex O. & G. Co. No. 1 Whitworth, 770 ft. S, 860 ft. E, NW cor. SW¼ sec. 10-16-16. T.D. 2,954 ft., S.W. and abd.

W. D. Chew No. 1 Spell, SW cor. SE SW sec. 29-21-15. Drlg. 2,114 ft.

Flake & Henry No. 1 Rogers, SW NW SW sec. 11-20-15. Drk.

Gulf Ref. Co. No. 1 E. P. Hatcher, 660 ft. N and E, SW cor. SE¼ sec. 11-17-15. Cg. 4,921 ft.

J. B. Hutchinson No. 2 Storey-Phillips, SW cor. NE NW sec. 28-16-13. Tstd. S.W. 1,099-1,125 ft.; S.D. W.O. 1,125 ft.

Innerstate Drlg. Co. No. 1 E. Smith, SW SE SW sec. 35-21-15. Acidized; testing; T.D. 1,628 ft.

Juan et al No. 1 P. Hobbs, SE cor. NW NW sec. 28-21-15. Cg. 1,320 ft.

Maja Oil Co. No. 1 Mathew, NE SE sec. 10-20-15. Cg. 2,198 ft.

Bill Morefield et al No. 1 Stokely, 745 ft. S and 100 ft. E, C sec. 5-20-16. Comp., pumped 25 bbls. per day, T.D. 955 ft.

Prairie River Synd. No. 1 Hutchinson, 330 ft. N and E, SW NW sec. 15-15-12. Cg. 6,142 ft.

Sport Oil Corp. No. 1-D Muslow, SE cor. sec. 5-20-16. D.S.T. 4,820 ft.; S.W.; W.O.

Stanolind O. & G. No. 107 Dillon Hrs., NW NE sec. 14-21-15. Comp., pumped 100 bbls. per day; T.D. 1,698 ft.

Stanolind O. & G. No. 108, NE NE sec. 14-21-15. Cg. 1,529 ft.

Stanolind O. & G. Co. No. 109, NE cor. sec. 14-21-15. Loc.

Stanolind O. & G. Co. No. 110, NE cor. 14-21-15. Loc.

Stanolind O. & G. Co. No. 111, NE cor. sec. 14-21-15. Loc.

Stewart-Williams No. 3 Iron, SW NE 10-20-15. 10-in. csg. cmt. 55 ft.

Stewart-Williams No. 1 Rogers Meara, sec. 10-20-15. Comp., pumped 20 bbls. per day. T.D. 2,250 ft.

Caldwell Parish

Crickett & Woods No. 1 fee, NW SE NE sec. 18-11-3. S.D. 1,325 ft.

Claiborne Parish

E. T. Oakes No. 1 H. W. Patton, NE cor. sec. 1-20-5. Drlg. 4,987 ft.

United Gas Public Service Co. No. 2 Durfett, 660 ft. N and 1,980 ft. E, SW cor. sec. 31-20-5. T.D. 8,616 ft., fshg. for D.P.

United Gas No. 1 A. P. Taylor, SE cor. sec. 5-19-5. Drk.

De Soto Parish

J. W. Adams No. 1 Jenkins Est., 241 ft. W, 274 ft. S, NE cor. sec. 3-12-12. S.D. 2,528 ft.

J. E. Carlson No. 1 A. P. Garland, 250 ft. S and E, NW cor. SW sec. 7-14-14. Drlg. 2,150 ft.; hole clean.

Jal Drlg. Co. No. 8-A Scales, 1,370 ft. N, 110 ft. E, SW cor. sec. 36-13-12. 6-in. cmt. 2,397 ft., W.O.C.S.

R. Kamon No. 1 Roscoe, SE NW sec. 14-12-13. R.U.

W. C. Nabors No. 1 fee, C NE¼ sec. 8-12-13. S.D. 1,217 ft.

R. C. Payne No. 1 Harris, sec 11-13-14. Drlg. by junk 2,200 ft.

T. W. Simmons No. 1 Johns, 330 ft. N, 990 ft. W cen. sec. 20-14-16. Loc.

Union Pet. Co. No. 1 Hill, sec. 3-10-12. Comp., pumped 10 bbls. per day, T.D. 3,052 ft.

Grant Parish

Pet. Prod. Co. No. 1 Buffington, SE NE sec. 18-9-1. Drlg. 50 ft.

Perry et al No. 1 Barrett, 150 ft. N and W, SE NE SE sec. 17-9-1e. Cmt. 6-in.; W.O.C.S.

Rogers Oil Co. No. 1 Swope, SW NW SW sec. 17-9-1. T.D. 1,604 ft.; 7-in. cmt.

Theo Davis et al No. 1 Barrett, NE cor. S½ SW NE sec. 19-9-1e. S.D. 1,710 ft.

Morehouse Parish

J. B. Collins et al No. 1 E. M. Clarke, SE NE sec. 10-20-7e. T.D. 3,760 ft.; S.D.; wtg. on D.S.T.

J. E. Farrell No. 26 State, 2,053 ft. S, 984 ft. E, NW cor. sec. 20-22-4e. Comp.; 2,000,000 ft. gas; T.D. 2,135 ft.

United Carbon Co. No. 5 Stovall, NE SE sec. 4-20-4. 6-in. cmt. 2,165 ft.; W.O.C.S.

United Gas No. 42 Crossett, SE cor. sec. 25-22-4e. R.U.

United Gas Co. No. 43 Crossett, SW cor. sec. 30-22-5e. T.D. 2,200 ft., testing.

United Gas Co. No. 44 Crossett, SE cor. sec. 24-22-5e. 6-in. pipe cmt. 2,165 ft.; W.O.C.S.

United Gas No. 45 Crossett, NW cor. sec. 31-22-5e. T.D. 2,230 ft.; testing.

United Carbon Co. No. 6 Stovall, SE cor. sec. 28-21-4. Loc.

United Carbon Co. No. 7 Stovall, NW cor. sec. 27-21-4. Loc.

Natchitoches Parish

Ivan A. Allen No. 1 Simpson, sec. 12-7n-7w. Drk.

C. D. Morrison No. 1 Moffitt, 250 ft. N, 250 ft. W, SE cor. sec. 19-10-10. 10-in. set 110 ft.; W.O.C.S.

Union Pet. Co. No. 2 DeBlieux, 2,395 ft. E, 150 ft. S of W cor. sec. 33-10-7w. Drlg. 3,100 ft.

Richland Parish

Gulf Ref. Co. No. 15 R. R. Rhymes et al, sec. 32-17-6e. Drlg. 6,455 ft.

J. S. Morrisey No. 1 Jones, 1,293 ft. N, 636 ft. E, SW cor. sec. 15-18-7e. S.D. 3,252 ft., contract depth.

Sabine Parish

M. C. Forsman No. 1 Patrick, NE SW sec. 21-9-13. W.O.S.R.

F. G. Cox No. 1 Whitney Corp., C NW NE sec. 8-9-13. Hole clean; preparing D.D.; T.D. 5,377.

Pearl Oil Co. No. 6 Crawford, C SE SE sec. 20-9-13. T.D. 3,487 ft.; junked and abnd.

J. R. Keen No. 1 Long Bell, 276 ft. N and 288 ft. W, SE cor. NE SW sec. 5-18-13. Acidized; W.O.S.R.

Claude A. Smith No. 1 Whitney Corp., NE cor. sec. 19-10-13. Recmtg. 5-in.; T.D. 3,500 ft.

A. H. Tarver No. 2 Baker, NW cor. NE sec. 36-8-12. D.S. test, 1,000,000 ft. gas; T.D. 5,200 ft. S.D. for water.

Union Parish

Federal Pet. Co. No. 1 fee, 330 ft. S and W, NE cor. sec. 34-21-3e. Drlg. 6,915 ft.

Federal Pet. Co. No. 2 fee, 330 ft. S and W, NE cor. sec. 5-19-3e. P.B. to 2,260 ft.; comp. 3,000,000 ft. gas; 1,075 lbs. R.P.

Innerstate Natl. Gas Co. No. 55, SE cor. sec. 5-20-4. 12-in. cmt. 179 ft.

Innerstate Natl. Gas Co. No. 53 fee, SE cor. sec. 31-21-4. R.U.

Innerstate Natl. Gas Co. No. 50 fee, SE cor. sec. 29-21-4. 6-in. cmt. 2,069 ft.; W.O.C.S.

Innerstate Natl. Gas Co. No. 52 fee, SE cor. sec. 32-21-4e. Cmtg. 6-in. 2,069 ft. W.O.C.S.

Innerstate Natl. Gas Co. No. 54 fee, SE cor. sec. 32-21-4. Cmt. 6-in. 2,067 ft.; W.O.C.S.

So. Carbon Co. No. 69 fee, 660 ft. S and E, NW cor. sec. 9-21-4e. R.U.

Webster Parish

W. D. Ambrose No. 1 T. Crichton, 330 ft. N and E, SW cor. SW NW sec. 36-18-9. Drlg. 5,850 ft.

J. P. Evans No. 1 Johnson, 501 ft. N, 200 ft. E, SW cor. NW SW sec. 36-18-9. P.B. to 5,620 ft.; tested 70,000,000 ft.; testing.

Magnolia Pet. Co. No. 5 J. Cox, SW SE sec. 23-21-10. Drk.

R. W. Norton No. 2 Josey & Masey, C W½ NE NW sec. 27-21-10. Clearing loc.

Red Hawk Oil Co. No. 1 Mayfield, sec. 9-23-9. 10-in. set 90 ft.; W.O.C.S.

Ohio Oil Co. No. 1 R. M. Coyle, NE SE sec. 22-21-10. Drk.

Ohio Oil Co. No. 1 Bodcaw Lbr. Co., C NE SE sec. 28-21-10. R.U.

L. R. Skidmore No. 1 Barnett, sec. 29-17-9. S.D. for wtr. 1,026 ft.

United Gas No. 1 Mixon, SE SW sec. 22-21-10. 13-in. cmt. 350 ft. W.O.C.S.

Woodley Pet. Co. No. 2-B L. C. Cox, cen. SW SW sec. 23-21-10. Loc.

Woodley Pet. Co. No. 4-B Gray, cen. NE NE sec. 27-21-10. Loc.

LOUISIANA

NORTH LOUISIANA PROVEN

Caddo-Bodcau

American Lib. Oil Co. No. 3 Norton, NE cor. sec. 17-23-15. R.U.

Ark.-La. Gas Co. No. 2 Teamer, NW SE SW sec. 13-23-16. Crooked hole; surveying; T.D. 6,053 ft.

Blackwell O. & G. No. 3 Neugent, 330 ft. S and W, NE cor. NE SE sec. 8-23-15. Comp., flowing 5 bbls. distillate per hour, 3/16 in. tubing choke, 5,000,000 ft. gas; T.D. 6,074.

Blackwell O. & G. No. 1 Wynn, 330 ft. N, 396 ft. E, SW SE NE sec. 8-23-15. Cg. 6,068 ft.

J. G. Collins No. 1 Caddo School, 2-ac. tr., no line, NW SE sec. 8-23-15. Comp., flowing 20 bbls. per hour, ¾-in. tbg. choke; T.D. 5,947 ft.

Idessa Oil Co. No. 1 D. K. Sumner, NW SW SE sec. 10-23-15. 9-in. cmt. 2,344 ft. W.O.C.S.

J. Edward Jones No. 1 Rockefellow, Lot 3, Blk. 21, sec. 23-23-16. 13-in.; drlg. 5,236 ft.

J. Edward Jones No. 1 M. Z. Sharp, 1,227 ft. N, 330 ft. E, SW cor. SE¼ sec. 4-23-16. Drk.

Lion Oil Ref. Co. No. 2 Wynn, 295 ft. N, 307 ft. E, SW cor. sec. 9-23-15. Comp., flowing 35 bbls. per hour; 7/16 in. tbg. choke. T.D. 6,094 ft.

Lion Oil Ref. Co. No. 3 Wynn, SW cor. sec. 9-23-15. Drlg. 250 ft.

Lion Oil Ref. Co. No. 4 Wynn, 330 ft. N, 990 ft. E SW cor. 9-23-15.

Louisiana Oil Ref. Corp. No. 1 Ratcliff, 330 ft. S and E, NW cor. sec. 16-23-15 7-inch csg. cmt. 6,035 ft.; T.D. 6,050 ft. W.O.C.S.

Louisian Oil Ref. Co. No. 2 Ratcliff, NW cor. sec. 16-23-15. Drlg 3,786 ft.

Louisiana Oil Ref. Co. No. 3 Ratcliff, NW cor. sec. 16-23-15. Drlg. 2,200 ft.

Magnolia No. 3-A Caddo Lv. Sd., NW SW NE sec. 21-23-16. Drlg. 2,250 ft.

Magnolia No. 6 Tyson, NE cor. sec. 13-23-16. Drlg. 4,350 ft.

McAlester Fuel Co. No. 1 W. M. Mitchell, SW cor. sec. 20-23-16. Drlg. 2,045 ft.

McAlester Fuel Co. No. 2 N. S. Tyson, C sec. 22-23-16. Drlg. 5,200 ft.

Magnolia No. 3 N. S. Spearman, 1,013 ft. S, 704 ft. E, NW cor. SW sec. 18-23-15. Drlg. 4,910 ft.

Phillips Pet. Co. No. 4 Adams, 330 ft. N and W, SE NE NW sec. 17-23-15. 7-in. csg. running; T.D. 6,060 ft.

Phillips Pet. Co. No. 1 Innerstate Ld. & Royalty Co., 330 ft. S and E, NW cor. NE NW sec 16-23-15. Comp., flowing 20 bbls. per hour, ¼-in. tubing choke; T.D. 6,076 ft.

Phillips No. 1 Rose McDonald, NW SW NE sec. 17-23-16. Drlg. 3,339 ft.

Phillips Pet. Co. No. 7 Norton, NE SE NW sec. 17-23-15. R.U.

Phillips No. 1 Wilbanks, NE SW SW sec. 8-23-15. Drlg. 4,785 ft.

Phillips No. 2 Cora Woods, 330 ft. N and E, SW cor. N½ NE sec. 17-23-15. Drlg. 5,630 ft.

Phillips No. 3 Cora Woods, 330 ft. N and E, SW cor. NE NE sec. 17-23-15. Drlg. 5,740 ft.

Phillips Pet. Co. No. 4 Cora Woods, SE NW NE sec. 17-23-15. Derrick.

Red Iron Drlg. Co. No. 1 Means, 330 ft. N and E, C sec. 9-23-15. Drlg. 5,129 ft.

Reinke et al No. 1 Fitts, 363 ft. S, 1,308 ft. E, NW cor. SW NW sec. 23-23-16. Perf. csg. and tstg.; T.D. 5,997 ft.

SOUTH LOUISIANA FIELDS

Bay St. Elaine—Terrebonne Parish

Texas Co. No. 12 State-Bay St. Elaine, sec. 20-22s-18e. Abd. 7,831 ft.

Black Bayou—Cameron Parish

Shell Pet. Corp. No. 34 Watkins, sec. 7-12s-12w. T.D. 5,165 ft.; P.B. 5,120 ft.; flwg. dry gas.

Shell Pet. Corp. No. 35 Watkins, sec. 8-12s-12w. Drk.

Dog Lake—Terrebonne Parish

Texas Co. No. 19 State, sec. 5-22s-16e. Drlg. 5,556 ft.

Cameron Meadows—Cameron Parish

Burton Sutton No. 14 School Land, sec. 16-14s-13w. Derrick (corrected).

Humble-Magnolia No. 17 Cameron Meadows, sec. 21-14s-13w. T.D. 4,941 ft.; tstd. S.W. on D.S.T. 4,804-16 ft.; 7-in. csg. 4,932 ft.; flowed salt water, killing to workover.

Darrow—Ascension Parish

Humble O. & R. Co. No. 4 Community, sec. 33-10s-2e. Drk.

Humble O. & R. Co. No. 13 Humble Community, sec. 33-10s-2e. T.D. 4,423 ft.; fshg.

Fausse Point—Iberia Parish

Texas Co. No. 2 State, sec. 35-11s-8e. Drlg. water sand 5,265 ft.

Four Isle—Terrebonne Parish

Texas Co. No. 7 State, sec. 14-21s-6e. Drlg. sandy lime 6,286 ft.

Gillis—Calcasieu Parish

Fohs Oil Co. No. 12 Castle, sec. 13-9s-8w. Drlg. 4,768 ft., shale.

Fohs Oil Co. No. 13 Castle, sec. 14-9s-8w. R.U.

Texas Co. No. 11 Nickerson, sec. 11-9s-8w. T.D. 6,724 ft.; W.O.C.

Union Sulphur Co. No. 8 Barbe, sec. 11-9s-8w. T.D. 8,471 ft.; P.B. 6,850 ft. W.O.C.

Union Sulphur Co. No. 9 Barbe, sec. 1-9s-8w. Drlg. sh. 6,767 ft.

Union Sulphur Co. No. 2 Kaufman, sec. 13-9s-8w. T.D. 6,773 ft.; P.B. 6,325 ft. W.O.C.

Union Sulphur Co. No. 13 State, sec. 12-9s-8w. Drk.

Union Sulphur Co. No. 15 State, sec. 12-9s-8w. Drk.

Hackberry—Cameron Parish

Gulf Oil Corp. No. 21 Irwin, sec. 12-12s-10w. Drlg. sh. 7,657 ft.

Stanolind O. & G. Co. No. 23-B Gulf Land sec. 14-12s-10w. T.D. 5,930 ft.; I.P. 679 bbls. per day.

Stanolind O. & G. Co. No. 24-B Gulf Ld., sec. 14-13s-10w. R.U.

Stanolind O. & G. Co. No. 2 Portie, sec. 23-12s-10w. Drlg. sh. 5,326 ft.

Texas Co. No. 21 State, sec. 12-12s-10w. Drk.

Texas Co. No. 19-B State, sec. 13-12s-9w. T.D. 6,683 ft; P.B. 4,700 ft. to sdtrk.

Jeanerette—St. Mary Parish

Herton Oil Co. No. 5 Banta, sec. 40-13s-9e. Drlg. sh. 5,510 ft.

Herton Oil Co. No. 1 Barrileau, sec. 59-13s-8e. T.D. 8,258 ft.; fsg.

Jennings—Acadia Parish

Stanolind O. & G. Co. No. 16 Houssiere-Latrielle, sec. 47-9s-2w. Cg. sd. 7,056 ft.

Stanolind O. & G. Co. No. 17 Houssiere-Latrielle, sec. 47-9s-2w. Drlg. shale and lime 5,888 ft.

Superior Oil Prod. Co. No. 1 Leckett, sec. 42-9s-2w. Drlg. sandy shale 5,997 ft.

Lafitte—Jefferson Parish

Texas Co. No. 5 Lafitte, sec. 20-17s-24e. T.D. 9,810 ft. Surveying hole.

Texas Co. No. 5 Rigolettes, sec. 29-17s-24e. Coring sandy shale 9,862 ft.

Lake Barre—Terrebonne Parish

Texas Co. No. 27 Lake Barre State. T.D 7,948 ft.; cutting and pulling stuck drill pipe.

Texas Co. No. 38 State, sec. 38-21s-19e. Top salt 1,355 ft.; base salt 3,710 ft.; T.D. 3,777 ft. Surveying hole.

Lake Hermitage—Plaquemines Parish

Gulf Oil Corp. No. 6, LaFourche, sec. 11-8s-25e. Location.

Lake Pelto—Terrebonne Parish

Texas Co. No. 15 State, sec. 17-23s-18e. Drlg. sand and lime 5,212 ft.

Leesville—LaFourche Parish

Gulf Oil Corp. No. 11 Allen Land. Top salt 5,639 ft.; T.D. 5,659 ft.; P.B. T.D. 3,877 ft.; pulling liner to retest.

Lincoln Oil Co. No. 8 State, sec. 34-21s-22e. Drlg. sandy shale 4,765 ft.

Texas Co. No. 51 Leesville, sec. 34-21s-22e. Drk.

Texas Co. No. 52 Leesville, sec. 34-21s-22e. Drk.

Texas Co. No. 53 Leesville, sec. 27-21s-22e. Drk.

Texas Co. No. 55 Leesville, sec. 34-21s-22e. T.D. 5,010 ft.; I.P. 2,250 bbls. per day, ⅛-in. choke.

Texas Co. No. 56 Leesville, 10¾-in. csg. 741 ft. Drlg. water sand 4,682 ft.

New Iberia—Iberia Parish

Crysanthon et al No. 1 Gulf fee, sec. 71-12s-7e. Drlg. sand rock 6,717 ft.

H. Postides No. 3 Schwing, sec. 25-12s-7e. Drk.

W. Hellis No. 2 Bolivar, sec. 56-12s-7e R.U.

Wm. Hellis No. 3 Schwing, sec. 56-12s-7e. Drlg. sand 5,798 ft.

Texas Co. No. 1 Clementine, sec. 25-12s-7e. Coring 5,144 ft.

Texas Co. No. 1 Granite, sec. 25-12s-7e. Drlg. sand 4,217 ft.

Texas Co. No. 1 Schwing, 10-in. csg. 1,841 ft.; drlg. shale 6,337 ft.

Roanoke—Jefferson Davis Parish

Humble O. & R. Co. No. 5 Devilbiss, sec. 14-9s-4e. Drlg. sh. 3,730 ft.

Port Barre—St. Landry Parish

Gulf Oil Corp. No. 14 Wilson Cochran, sec. 4-6s-5e. T.D. 3,481 ft. S.D.

Pan American Prod. Co. No. 1 Haskins Garland. Drlg. shale 2,732 ft.

St. Martinville—St. Martin Parish

Continental Oil Co. No. 1 fee, sec. 57-11s-6e. 13⅜-in. csg. 1,387 ft.; T.D. 6,707 ft., pulled drill pipe in two 90 ft. off bottom; fishing.

Sulphur—Calcasieu Parish

Union Sulphur Co. No. 782 fee, sec. 29-9s-10w. Drlg. lime 2,735 ft.

Union Sulphur Co. No. 832 fee, sec. 30-9s-10w. T.D. 3,738 ft.; 7-in. csg. 3,718 ft.; I.P. 720 bbls. per day.

Union Sulphur Co. No. 833 fee, sec. 29-9s-10w. Drlg. 2,783 ft.

Tepetate—Acadia Parish

Continental Oil Co. No. 6-A Homeseekers Dev. Co., sec. 29-7s-2w. T.D. 8,314 ft. W.O.C.

Continental Oil Co. No. 7-A Homeseekers, sec. 29-7s-2w. Derrick.

Continental Oil Co. No. 2 P. W. Miller, sec. 28-7s-2w. R.U.

Continental Oil Co. No. 1 Ortego, sec. 29-7s-2w. Spudded.

Continental Oil Co. No. 3 Ortego. T.D. 8,314 ft.; oil sd.; I.P. 235 bbls. per day, 5/32 inch choke.

Continental Oil Co. No. 5-A Welch, sec. 28-7s-2w. T.D. 8,307 ft. W.O.C.

Vinton—Calcasieu Parish

Vinton Pet. Co. No. 1 fee, sec. 34-10s-12w. Drlg. sh. 4,746 ft.

S. LOUISIANA WILDCATS

Acadia Parish

H. E. Dalton No. 1 Setting, sec. 17-7s-1w. T.D. 1,700 ft., running surface csg.

Allen Parish

Humble O. & R. Co. No. 2 Bell est., 933 ft. N and E, sec. 26-6s-7w. T.D. 9,833 ft.; P.B. to 7,800 ft.

Avoyelles Parish

Frost Oil Co. No. 1 Hines Lumber Co., sec. 3-3n-4e. Drk.

Calcasieu Parish

Buhler Oil Co. No. 2 Faiszt, sec. 26-8s-10w. Old T.D. 4,412 ft.; S.D. 3,755 ft.

General Crude Oil Co. No. 1 George P. Buhler, sec. 30-8s-9w. Drlg. shale 2,974 ft.

Union Sulphur Co. No. 1 Wurmost, sec. 9-11s-8w. Abd. 9,259 ft.

Cameron Parish

Magnolia Pet. Co. No. 1, Johnson Bayou, sec. 16-15s-14w. R.U.

Pure Oil Co. No. 1, Mallard Bay, sec. 22-13s-3w. T.D. 1,494 ft.; running surf. csg.

East Baton Rouge Parish

Cavalier Oil Co. No. 1 Vingnes, sec. 40-8s-2e. Drlg. shale 5,200 ft.

Cavalier Oil Co. No. 1 Young, sec. 62-4s-3w. Drk.

East Feliciana Parish

East Feliciana Oil No. 1 West & Budding, sec. 37-1s-1w. Spudded 15 ft. and S.D.

Iberia Parish

Texas Co. No. 1-B State, Vermillion Bay, sec. 16-15s-6e. Drlg. shale 7,568 ft.

Jefferson Parish

Triangle Oil Co. No. 1 Conroe, sec. 125-12s-11e. R.U.

Jefferson Davis Parish

Shell Pet. Corp. No. 1 Joe Sturdivant, sec. 25-10s-4w. 10¾-in. csg. 2,616 ft. T.D. 2,619 ft.; W.O.C.

Stanolind O. & G. Co. No. 1 C. E. Britt sec. 15-10s-3w. Coring sandy shale 9,310 ft.; 9⅝-in. csg. 8,842 ft.

Livingston Parish

Coastline Oil Co. No. 1 Addison Trust Co., sec. 7-7s-3e. Drk.

Plaquemines Parish

Tide Water Oil Co. No. 1 Manhattan Fruit Co. O.W.D.D.; T.D. 4,000 ft., running 7-in. protection csg.

St. Bernard Parish

John Cartwright No. 1 Meraux Nunes, sec. 19-13s-12e. Drlg. sand 6,212 ft. (corrected).

St. James Parish

Shell Pet. Corp. No. 1 Colonial Sugar, sec. 5-12s-5e. T.D. 7,522 ft.; top salt 7,493 ft.; P.B. 3,316 ft.; S.D.

St. Martin Parish

Texas Co. No. 3 State, sec. 14-10s-9e. Drlg salt water sand 8,366 ft.

Texas Co. No. 1 Bayou Sale, sec. 23-17s-9e. Drlg. shale 1,254 ft.

St. Mary Parish

Mike Hogg et al No. 1 Lawa Realty Co., Inc., sec. 30-13s-10e. T.D. 7,210 ft.; showed 58 thrib. of oil on D.S.T.; 7-in. csg. 7,196 ft.; I.P. 450 bbls. per day through ¼-in. choke. T.P. 700 lbs.

Terrebonne Parish

J. B. Beck et al No. 1 Realty Operators, sec. 103-17s-17e. T.D. 2,216 ft.; P.B. 1,420 ft.; 7-in. csg. 1,420 ft.; W.O.C.

Humble O. & R. Co. No. 1 Continental Land & Fur. Co., sec. 30-17s-14e. T.D. 10,254 ft.

Humble O. & R. Co. No. 1 H. J. Ellender, sec. 23-19s-19e. Drk.

Vermilion Parish

Continental Oil Co. No. 1 O. C. Hebert, sec. 20-12s-3e. Drlg. sh. 11,315 ft.

Delcambre & Shelton No. 1 Delcambre, sec. 63-12s-6e. S.D. 2,708 ft.

Del-Shell Exploration Co. No. 1 Landry hrs., sec. 1-13s-4w. S.D. 2,000 ft.

Louisiana Land & Expl. Co. No. 1 La. Fur Co., sec. 16-15-1e. Bldg. foundations.

ARKANSAS

Calhoun County

I. P. B. Oil Corp. No. 1 Henisberger, SW SW SE sec. 9-11-13. Cmt. 10-in. 109 ft. W.O.C.S.

Cleveland County

A. B. Diffie No. 1 L. C. Ross, 330 ft. S and W, NE cor. SW NE sec. 11-11-11. 12-in. cmtd. 101 ft.; W.O.C.S.

R. L. Saxon No. 1 Tipton, SE cor. SW NE sec. 13-11-12. R.U.

Columbia County

Buford & Co. No. 1 Kendrick, 330 ft. S and E, NW cor. SE¼ sec. 7-19-18. Drlg. 2,300 ft.

Dallas County

Walter Lown No. 1 G. Atkinson, NE NW SE 7-10-13. R.U.

A. F. Tarver No. 1 Wilbon, sec. 21-9-13. S D. for water; T.D. 2,135 ft.

Hempstead County

Easton et al No. 2 Conway-Tiller, 330 ft. N and E, SW cor. SW sec. 34-12-27. Drlg. 1,860 ft

Imperial Oil & Gas Prod. Co. No. 1 Foster Est., sec. 35-12-26. R.U.

Spooner et al No. 2 Lafferty, sec. 17-14-24 Tstg.; running 4-in. csg. T.D. 2,451 ft.

LaFayette County

A. M. Neeley No. 1 Meek, 330 ft. S and W, NE cor. NE NW sec. 35-19-25. R.U.

Little River County

M. E. Sanderson No. 1 Punning, sec. 6-13-20. 10-in. cmtd. 168 ft.; W.O.C.S.

Miller County

McClanahan et al No. 1 Miller Ld. & Lbr. Co., SW cor. sec. 2-18s-28w. Drlg. 4,-990 ft.

Odell Hinson No. 1 Montana Realty Co., 320 ft. S and W NE NW NW sec. 3-17-28. Drlg. 4,035 ft.

Nevada County

Benedum & Trees No. 1 Groves, C N half SE NW sec. 10-14-20. T.D. 855, coring water sd.

Ouachita County

Phillips Pet. Co. No. 1 Arnold, 660 ft. S and 330 ft. E, NW cor. NE sec. 27-16-15. T.D. 5,708 ft., hd. blk. li., no shows. S.W. 5,630 to 5,708 ft.; P.B. to 5,425 ft. and arg. pull 7 in.

O. F. Whittaker, Tr., No. 1 S. Howard, 600 ft. E and 150 ft. N, SW cor NW NE sec. 20-12-16. S.D. 2,716 ft.

Pulaski County

C. L. Kilselman No. 1 fee, sec. 2-1-13. S.D. 400 ft.

Union County

Penn-Ark. Corp. No. 1 W. N. Raulston, 330 ft. S and E, NW NW SE sec. 13-17-14. S.D. 108 ft.

Phillips Pet. Co. No. 1 Morgan, C Lot 1, S½ sec. 18-18s-17w. T.D. 4,270 ft., dry and abnd.

TEXAS

Week Ending September 12

GULF COAST FIELDS

Raccoon Bend—Austin County

Humble O. & R. Co. No. 5-B-X Hardy, J. and E. Grace Sur., 9⅝-in. csg. 1,153 ft. Drlg. lime 3,770 ft.

Hastings—Brazoria County

Humble O. & R. Co. No. 1 Brown, W. H. Snyder Sur. 10¾-in. csg. 1,831 ft.; I.P. 27 bbls. per hour ¼-in. choke; T.P. 875 lbs., C.P. 850 lbs.

Humble O. & R. Co. No. 2 Brown, W. H. Snyder Sur. R.U.

Stanolind O. & G. Co. No. 2-B Avitta, H. T.&B. Sur. No. 29. T.D. 5,950 ft., 7-in. csg. 5,648 ft.

Stanolind O. & G. Co. No. 3-B Brown, H. T.&B. Sur. No. 29. T.D. 6,060 ft.; 7-in. csg. 5,767 ft.; I.P. 424 bbls. in 15 hours through ¼-in. choke.

Stanolind O. & G. Co. No. 4-B Brown, H.T.&B. Sur. No. 29. T.D. 1,859 ft. Running 10¾-in. csg.

Stanolind O. & G. Co. No. 2 Curketh, H. T.&B. Sur. No. 35. T.D. 6,128 ft., making coring test.

Stanolind O. & G. Co. No. 4 Ford, A.C.H. &B. Sur. No. 1. Drk.

Stanolind O. & G. Co. No. 1 Scott, H.T. &B. Sur. No. 29. R.U.

Stanolind O. & G. Co. No. 8 Sneed, Lot 13, A.C.H.&B. Sur. T.D. 6,092 ft., running 7-inch csg.

Danbury—Brazoria County

Humble O. & R. Co. No. 1 Moller, S. A. Towsey Sur. T.D. 7,179 ft.; P.B. 6,128 ft.; tstd. brackish drlg. mud; P.B. 5,-785 ft.; perf. csg. 5,761-81 ft.; I.P. 24 bbls. of distillate per day through ¼-in. choke.

Lockridge—Brazoria County

Gulf Oil Co. No. 2-A Wilkes and Smith, J. Robinson Sur. R.U.

Old Ocean—Brazoria County

Harrison & Abercrombie No. 1 Armstrong Plantation fee, Polly and Chance Sur. T.D. 9,961 ft.; running screen to test.

Manvel—Brazoria County

Bowles & Borsodi No. 4 Norvell Co., Inc., H.T.&B. Sur. No. 23. R.U. and S.D.

Texas Co. No. 23 Houston Oil Field Assn., A.C.H.&B. Sur. No. 91; 10-in. csg. 1,130 ft. W.O.C.

Texas Co. No. 3 Lemmer, T. Spraggins Sur. R.U.

Texas Co. No. 2 Richards, Lot 6. H.T.&B. Sur. T.D. 4,350 ft.; P.B. 3,900 ft.; sdtkd. 3,906 ft.; T.D. 4,084 ft. Abd.

Texas Co. No. 3 Dawson, H.T.&B. Sur. No. 23. T.D. 5,700 ft., I.P. 520 bbls. per day through ¼-in. choke.

West Columbia—Brazoria

Sterling O. & G. Co. No. 1 J. A. Phillips, Geo. Kennilee Sur. Drk.

Texas Co. No. 14 Abrams, George Tenille League Sur. Drlg. shale 3,601 ft.

Heyser—Calhoun County

Al Buchanan No. 1 P. H. Welder, D. L. Palmer Sur. Abd. in sidetracked hole 5,649 ft.

Humble O. & R. Co. No. 4-A Welder, J. M. Rios Sur. R.U.

Humble O. & R. Co. No. 2-B Welder, Maria Rios Sur. T.D. 5,495 ft.; flowing into pits, no gauge.

Humble O. & R. Co. No. 3-B Welder, A. Sisneros Sur. R.U.

Humble O. & R. Co. No. 3 Patrick Welder, A. Sisneros Sur. T.D. 4,816 ft., 7-in. csg. 4,831 ft. Completed, no gauge.

Anahuac—Chambers County

Gulf Oil Corp. No. 4 Knowles, sec. 48, H. &T.C. Sur. T.D. 7,121 ft., 7-inch csg. 7,081 ft.

Humble O. & R. Co. No. 7 Braussard and Hebert, sec. 58, H.&T.C. Sur. T.D. 1,507 ft. W.O.C.

Humble O. & R. Co. No. 14 Clark, sec. 57, H.&T.C. Sur. T.D. 7,090 ft., 7-in. csg. 7,070 ft.

Humble O. & R. Co.'s No. 4 Engels, sec. 50, H.&T.C. Sur. Drlg. sand 5,072 ft.

Humble O. & R. Co. No. 5 Gripon, sec. 53, H.&T.C. Sur. 9⅝-in. csg. 1,512 ft.; T.D. 7,093 ft.; I.P. 20 bbls. per hour through ¼-in. choke.

Humble O. & R. Co. No. 13 White, J. McGahey Sur Drlg. shale and lime 6,124 ft.

Humble O. & R. Co. No. 5-B White, J. McGahey Sur. T.D. 7,224 ft. P.B. 7,045 ft.; 5½-in. csg. 6,979 ft.

Sun Oil Co. No. 1 White, James McGahey Sur. T.D. 7,143 ft., 7-in. csg. 7,120 ft. W.O.C.

Sun Oil Co. No. 21 White, James McGahey Sur. Coring shale 7,044 ft.

Cotton Lake—Chambers County

Glenn McCarthy, Inc., No. 2 Kilgore, Townsend Sur. Abd. 7,030 ft.

Glenn H. McCarthy No. B Kilgore, J. Townsend Sur. R.U.

Humble O. & R. Co. No. 1 Dutton, Kate Dugat Sur. Spudded.

Turtle Bay—Chambers County

Stanolind O. & G. Co. No. 3 State Land. 10¾-in. csg. 1,147 ft.; T.D. 6,620 ft.; tested salt water, P.B. 6,505 ft., prepare for drill stem test.

Sun Oil Co. No. 1 C. J. Chambers, M. A. Carroll Sur. 16-in. csg. 1,197 ft.; T.D. 138 ft.

Big Creek—Fort Bend County

H. L. Patton No. 1 Bryan, M. Young Sur. S.D. 1,675 ft.

Thompson Drlg. Co. No. 1 W. C. Moore, B. Wickerson Sur. R.U.

Blue Ridge—Fort Bend County

Aldridge & Taylor No. 3 West & Scheneck, T. Habermacher Sur. T.D. 1,950 ft.; (corrected); running screen.

Barnett Pet. Co. No. 1-B Blakely, Lot 7, Blk. E, Drew Sur. Drlg. 657 ft.

Ben G. Barnett No. 1-C Blakely, E. Drew Sur. Top salt 2,666 ft.; T.D. 2,667 ft.; swbd. S.W.; S.D.

H. H. Hoffman No. 1 Lee, J. Poitevent Sur. T.D. 4,014 ft., 7-in. csg. 3,890 ft.

Texas Gulf Prod. Co. No. 1-B Blakely, Lot No. 7, E. Drew Sur. T.D. 3,887 ft.; P.B. to 2,250 ft.; will sidetrack.

Boling—Fort Bend County

Mack Hank Oil Co. No. 2-C Farmer, J. Scott Sur. T.D. 1,100 ft.

H. K. Spear et al No. 1 Kaspesek, Simon Miller Sur. T.D. 3,983 ft.; running 7-inch csg.

Orchard—Fort Bend County

Gulf Oil Corp. No. 46 Moore, Leo Burknapp Sur. Drlg. sh. 6,415 ft.

Gulf Oil Corp. No. 48 Moore, J. Frazier Sur. Drlg. L. rock 2,015 ft.

Gulf Oil Corp. No. 6-A Moore, J. Frazier Sur. Drlg. L. rock 2,337 ft.

Sugarland—Fort Bend County

Rogers No. 2 Detherage, E. Alcorn Sur. Top sand showing oil 3,860 ft.; coring 3,880 ft.

Thompson-Fort Bend County

Jenal Oil Co. No. 3 Byrgon, Young Sur., 10-in. csg. 200 ft. W.O.C.

Sterling O. & R. Co. No. 2 Booth, H. Cristmas Sur. 10-in. csg. 802 ft. W.O.C.

High Island—Galveston County

Stanolind O. & G. Co. No. 57-A Cade, N. Fitzsimmons Sur. 9⅝-in. csg. 5,282 ft.; T.D. 5,700 ft.; heaving sh.; P.B. 5,305 ft.; completed, no gauge.

Stanolind O. & G. Co. No. 9-B Cade, M. Dunman Sur. R.U.

Stanolind O. & G. Co. No. 58 Cade, N. Fitzsimmons Sur. T.D. 3,081 ft.; fshg.

Stanolind O. & G. Co. No. 8 B.&O. fee, M. Dunman Sur. T.D. 5,330 ft.; 7-in. csg. 5,235 ft.; P.B. 5,252 ft.; perf. csg. 5,184-96 ft.; swabbing 35 bbls. per day.

Dickinson—Galveston County

Humble O. & R. Co. No. 1 Mealy. Drlg. sh. and shells 6,975 ft.

Humble O. & R. Co. No. 10-A Stewart, W. K. Wilson Sur. Drlg. sh. 4,770 ft.

Kenben Oil Co. No. 2 Stewart, W. K. Wilson Sur. T.D. 8,691 ft.; 6⅝-in. csg. set on bottom; perf. csg. 8,632-42 ft.; rocking with gas.

Keneo Oil Co. No. 2 Broughton, N offset to No. 1. Spudded.

Pan American Prod. Co. No. 1 Louise Craig, W. K. Wilson Sur. T.D. 8,140 ft. tested part water, pulling screen to deepen.

Stanolind O. & G. Co. No. 6 State River Bed, 13⅜-in. csg. 2,119 ft.; T.D. 7,523 ft., P.B. 6,812 ft. W.O.C.

Greens Lake—Galveston County

Sun Oil Co. No. 1 Hughes, W. C. M. Baker Sur. (W.O.); setting cmt. plug 2,180-1,950 ft.; T.D. 3,634 ft.; 7-in. csg. 3,619 ft.; I.P. 260 bbls. per day through ¼-inch choke; C.P. 150 lbs.; T.P. 150 lbs.

Sun Oil Co. No. 3 J. D. Hughes, Wm. C. Baker Sur. Drlg. shale 5,046 ft.

Sun Oil Co. No. 4 Hughes, W. C. M. Baker Sur. Drk.

Arriola—Hardin County

Republic-Houston Oil Co. No. 14 fee, E. Arriola Sur. 13⅜-in. csg. 835 ft.; T.D. 3,285 ft.; 9⅝-in. csg. 3,270 ft.; fishing for tubing.

Republic Prod. Co. No. 15 fee, E. Arriola Sur. Spudded.

Eureka—Harris County

Houston Oil Co. No. 1 Helberg & Lackner, John Rinerman Sur. T.D. 7,676 ft.; completed for gas well.

Fairbanks—Harris County

Amerada-Stanolind No. 1 Carpenter, Francis Fry Sur. 16-in. csg. 54 ft.; 10¾-in. csg. 1,014 ft.; drlg. shale 5,690 ft.

Mykawa—Harris County

Flanagan Oil Co. No. 1 M. J. Cowherd, Lot 260, Wm. Lovett Sur. Drlg. sh. 3,830 ft.

West Prod. Co. No. 10 W. H. Irwin, W. B. Walker Sur. Drk.

West Prod. Co. No. 1 Minnetex, Wm. Lovett Sur. T.D. 5,943 ft.; P.B. 5,430 ft.; sdtrk. 5,131 ft.; drlg sh. 6,576 ft.

Pierce Junction—Harris County

Gulf Oil Corp. No. 41 Taylor, J. Hamilton Sur. T.D. 3,987 ft.; P.B. 3,962 ft.; S.D.

Rio Bravo Oil Co. No. 11 fee, B.B.B.&C. Sur. T.D. 1,078 ft., 10¾-in. csg. 1,070 ft.

South Houston—Harris County

O'Mera Drlg. Co. No. 2 Williams, drlg. 2,630 ft.

Smith & McDannald No. 2 Merredith, Blk. 48, Mary Nichlos Sur. Comp., no report.

Stanolind O. & G. Co. No. 1 Ball, Tr. No. 137, H.T.&B. Sur. No. 6. 10¾-in. csg. 1,469 ft.; T.D. 4,832 ft.; 7-in. csg. 4,825 ft.

Stanolind O. & G. Co. No. 1 Carson, H. T.&B. Sur. No. 6, T.D. 4,825 ft.; I.P. 52 bbls. in 23 hours.

Stanolind O. & G. Co. No. 1, District No. 11. Derrick.

Stanolind O. & G. Co. No. 4 First Natl. Bank, Callahan and Vince Sur. 10¾-in. csg. 1,454 ft.; 7-in. csg. 4,760 ft.; T.D. 4,825 ft.; pumping, no gauge.

Stanolind O. & G. Co. No. 1 Holland and Price, Tr. No. 26, H.T.&B. Sur. No. 26. T.D. 4,775 ft., running electrical coring test.

Stanolind O. & G. Co. No. 2 Holland and Price, Tr. 26, H.T.&B. Sur. 16-in. csg. 89 ft.; drlg. sandy shale and lime 4,374 ft.

Stanolind O. & G. Co. No. 3 Schwartz, Tract No. 24. Drlg. shale 3,947 ft.

Stanolind O. & G. Co. No. 4 Schwartz, H.T.&B. Sur. No. 6. Drlg. shale 1,755 ft.

Stanolind O. & G. Co. No. 2 Wydelts, Tr. 25, H.T.&B. Sur. Drlg. shale 2,358 ft.

Tomball—Harris County

Humble O. & R. Co. No. 4-B Quilter. T.D. 5,548 ft., comp., no gauge.

Texas Co. No. 1 S. T. Daughtre, I.&G.N. Sur. Drlg. sh. and lime 4,143 ft.

Amelia—Jefferson County

Humble O. & R. Co. No. 1 R. G. Pevto, C. Williams Sur. 10¾-in. csg. 2,025 ft.; T.D. 6,781 ft.; oil sd.; I.P. 21 bbls. per hr. through ¼-in. choke; T.P. 2,100 lbs.; C.P. 2,620 lbs.

Humble O. & R. Co. No. 1 Phelan, C. Williams Sur. Drk.

Humble O. & R. Co. No. 1 Tyrell Combest, C. Williams Sur. 10¾-in. csg. 1,991 ft.; T.D. 2,030 ft.

Glenn H. McCarthy No. 2-A B. M. Long, H. Williams Sur. T.D. 3,850 ft., installing new boiler.

Normandie Oil Corp. No 1 G. C. Prutzman, H. Williams Sur. Derrick.

Shell Pet. Corp. No. 1 Paggi, J. W. Kirby Sur. R.U.

Fannett-Jefferson County

Gulf Oil Corp. No. 16 Thomas, W. H. Smith Sur. T.D. 4,261 ft.

Gulf Oil Corp. No. 19 Thomas, W. H. Smith Sur. R.U.

Nome—Jefferson County

Sur. Oil Co. No. 2 Long, John Blair Sur. 10¾-in. csg. 1,091 ft.

Cleveland—Liberty County

Gulf Oil Corp. No. 3 McDonald, Chas. Smith Sur. T.D. 5,708 ft.; perf. csg. 5,704-08 ft., testing.

Hankamer—Liberty County

Gulf Oil Corp. No. 1 Bernice Hankamer. R.U.

Gulf Oil Corp. No. 1 Weaver, A. W. Weaver Sur. T.D. 4,085 ft.; pulling screen.

Gulf Oil Corp. No. 1 J. L. Weaver. Drlg. shale 1,136 ft.

Uscan Oil Co. No. 5 Ezzell, Levi Barrow Sur. T.D. 5,678 ft.; 7-in. csg. 2,689 ft.; waiting comp. of No. 6.

Uscan Oil Co. No. 6 Ezzell, due south of No. 5 Levi Barrow Sur. T.D. 5,815 ft.; 7-in. csg. 5,765 ft.; PB. 2,627 ft., perf. csg.

Hull—Liberty County

Gulf Oil Corp. No. 112 Phoenix, J. Devore Sur. T.D. 3,612 ft., fishing.

Republic Prod. Co. No. 161 Dolbear, J. Devore Sur. Abd. 4,190 ft.

Esperson—Liberty County

General Crude Oil Co. No. 19 Davis, D. Kokernot Sur. Drlg. sh. 3,662 ft.

General Crude Oil Co. No. 30 Esperson, 13⅜-in. csg. 85 ft. W.O.C.

General Crude Oil Co. No. 19 Moores Bluff, M. Duncan Sur. Drlg. sdy. sh. 2,211 ft.; T.D. 2,599 ft.; pulling screen.

Hawkinsville—Matagorda County

Sun Oil Co. No. 2 Craig, T. Williams Sur. Spudded.

Van Vleck—Matagorda County

McDaniel Drlg. Co. No. 1 C. T. Dye, M. Cummins Sur. R.U.

Skelly Oil Co. No. 9-C Cobb, M. Cummins Sur. T.D. 7,728 ft.; 7⅝-in. csg. 7,700 ft.; drlg. plug.

Skelly Oil Co. No. 10 C. Cobb, M. Cummins Sur. Drlg. sh. 7,527 ft.

Skelly Oil Co. No. 2 Metzer, M. Cummins Sur. T.D. 7,500 ft.; 7-in. csg. on bottom. T.D. 8,289 ft., testing.

Conroe—Montgomery County

Adeltex Oil Co. No. 1 Lewellen, R. G. Hunter Sur. Drk.

Alpha Pet. Co. No. 5 Stevens, L. Smith Sur. T.D. 4,989 ft.; 7-in. csg. 4,936 ft.; I.P. 585 bbls. per day through ¼-in. choke.

Gar Flo Oil Co. No. 4 Keystone Mills, A. Steel Sur. 10¾-in. csg. 1,284 ft.; drlg. shale 4,939 ft.

Strake Pet. Co. No. 12 Keystone, L. Smith Sur. 10¾-in. csg. 915 ft.; drlg. 4,438 ft.

Ace—Polk County

Dick Schwab No. 2-A Kirby West Lbr. Co., P. A. Sublett Sur. Drlg. shale 4,547 ft.

Orange—Orange County

Texas-Canadian Oil Co. No. 1 Lutcher Moore, J. Dyson Sur. T.D. 7,000 ft. Abd.

Greta—Refugio County

D. & D. Oil Co. No. 4 Fannie Heard. T.D. 4,952 ft.; I.P. 165 bbls. per day through ⅛-in. choke.

Hewitt & Daugherty No. 28 Lambert, Carr and Connel Sur. T.D. 5,936 ft.; I.P. 609 bbls. per day, ¼-in. choke.

Hewitt & Daugherty No. 31 Lambert, Swisher Sur. Drlg. 1,910 ft.

Josey & Bruton No. 2 Lambert, Swisher Sur. Drlg. 1,312 ft.

United Gas Co. No. 27 Lambert, C. S. Hardwick Sur. T.D. 5,905 ft.; W.O.C.

United Gas Co. No. 28 Lambert, Hew Sur. Spudded.

Refugio—Refugio County

Atlantic O. P. Co. No. 6 Tomoconnor, N. S. Crunk Sur. 10¾-in. csg. 1,310 ft.; T.D. 4,402 ft.; 7-in. csg. 4,401 ft.; I.P. 135 bbls. per day, ¼-in. choke.

United Gas Co. No. 16 Heasd, Lot 13, Refugio townsite. Drlg. shale 1,530 ft.

United Gas Co. No. 4 Rea, Lot 1, Block 5, drlg. 2,637 ft.

Quintana-O'Connor—Refugio County

Quintana Oil Co. No. 3 Heard, T. H. Webb Sur. T.D. 5,919 ft.; I.P. 1,311 bbls. per day, ⅝-in. choke.

Quintana Pet. Co. No. 1 Mary C. Bauer, Ximines Sur. R.U.

Quintana Oil Co. No. 4-C O'Connor, G. W. Maine Sur. T.D. 5,929 ft.; W.O.C.

Quintana Oil Co. No. 38-A O'Connor, Swisher Sur. Spudded.

Quintana Pet. Co. No. 5-C Tom O'Connor, Swisher Sur. Derrick.

Hughes—Victoria County

Portilla Oil Corp. No. 2 P. H. Welder, Felipe Dimmitt Sur., 933 ft. N of No. 1, T.D. 4,820 ft.; I.P. 5 bbls. per hour.

Placedo—Victoria County

American Liberty Oil Co. No. 2 Cortez, Brownson Sur. Drk.

Barnsdall-American Liberty No. 3 W. R. Smith, A. Murphy Sur. T.D. 6,168 ft.; 7-in. csg. 5,946 ft.; perf. csg. 5,905-10 ft.; tstg.; I.P. 104 bbls. 14 hours, ⅛-in. choke; T.P. 1,850 lbs.; C.P. 2,100 lbs.

Barnsdall Oil Co. and American Liberty Oil Co. No. 5 Pickering and Roos, J. M. Brownson Sur. T.D. 4,769 ft.; 7-in. csg. 4,753 ft.; I.P. 55 bbls. in 3 hours, ¼-in. choke.

Barnsdall-American Liberty Oil Co. No. 6 Pickering and Roos, J. M. Brownson Sur. R.U.

Barnsdall-American Liberty Co. No. 7 Pickering and Foos, S.A.&M.G. Survey. Derrick.

Crown Central Oil Co. No. 5 Gebrauer, S A.&M.G. Sur. T.D. 4,781 ft.; I.P. 70 bbls. per day, 5/32 in. choke.

Crown Central Oil Co. No. 6 Gebrauer, S.A.&M.G. Sur. 10¾-in. csg. 814 ft. W.O.C.

Commonwealth No. 3 Prencia, J. M. Bronson Sur. 10¾-in. csg. 850 ft.; T.D. 4,777 ft.; running csg.

Harrison & Abercrombie No. 4 Voss, Brownson Sur. R.U.

Haynes B. Ownby No. 1 Traylor, J. M. Brownson Sur. T.D. 4,765 ft.; I.P. 90 bbls. in 20 hours, 9/64 in. choke.

Magnolia Pet. Co. No. 2 Henderson and Pickering, Wm. Rupley Sur. Derrick.

Magnolia Pet. Co. No. 2 Henderson, Wm. Rupley Sur. Drk.

Magnolia Pet. Co. No. 2 Sklar, S.A.&M.G. Sur. T.D. 4,777 ft.; I.P. 195 bbls. in 13 hours, ⅛-in. choke.

E. L. Smith Oil Co. No. 2 E. Boehn, S.A. &M.G. Sur. R.U.

Superior Oil Co. and F. A. Gillespie No. 1 Hosek, S.A.&M.G. Sur. No. 7. T.D. 4,775 ft.; I.P. 177 bbls., 12 hours, ¼-inch choke.

Westgate Oil Co. No. 3 Mieska, J. M. Brownson Sur. 10¾-in. csg. 839 ft.; T.D. 4,768 ft.; I.P. 108 bbls. per day, ⅛-in. choke.

Clay Creek—Washington County

Pompkal et al No. 3 Klatle. S.D. 576 ft.

Sun Oil Co. No. 1 H. Lauter, N. Clay Sur. T.D. 7,454 ft.; 7-in. csg. 7,445 ft.; S.D.

Sun Oil Co. No. 4 Quaber. T.D. 1,113 ft., completed, no gauge

Five Corners—Wharton County

Texas Co. No. 3-B Pierce, E. P. Ogden Sur. 10-in. csg. 1,182 ft.; drlg. sand 5,561 ft.

Louise—Wharton County

Pure Oil Co. No. 2 Jones, Morris and Cummings Sur. T.D. 5,165 ft.; 7-in. csg. 5,149 ft.; killed well, to pull tubing.

Pure Oil Co. No. 4 Lancaster, M. Cummins Sur. T.D. 5,155 ft., 7-in. csg. 5,130 ft.

Pickett Ridge—Wharton County

Edwards Drlg. Co. No. 1 Rod. T.D. 4,721 ft. Abd.

Texas Co. No. 26-A Pierce, I.&G.N. Sur. No. 35. T.D. 4,708 ft.; 7-in. csg. 4,708 ft.; T.D. 4,713 ft.; S.D.

Texas Co. No. 27-A Pierce, I.&G.N. Sur. No. 38. T.D. 4,711 ft.; 7-in. csg. 4,705 ft.; R.U. to pmp.

Texas Co. No. 29-A Pierce, I.&G.N. Sur. No. 39, 10-in. csg. 1,319 ft.; Abd. 4,748 ft.

Texas Co. No. 30-A Pierce, I.&G.N. Sur. No. 38. T.D. 4,713 ft., 7-in. csg. 4,705 ft. W.O.C.

Texas Co. No. 31-A Pierce, I.&G.N. Sur. Abd. 4,819 ft.

Withers—Wharton County

Texas Co. No. 11-C Pierce. John Caldwell Sur. T.D. 5,556 ft.; I.P. 15 bbls. per hour through ¼-in. choke.

Texas Co. No. 12-C Pierce, Wm. Pettus Sur. R.U.

Texas Co. No. 13-C Pierce, John Caldwell Sur. R.U.

GULF COAST WILDCATS

Austin County

W. H. Mitchell et al No. 1 F. Fenner, J Fitzgibbons Sur. Drlg. shale 2,515 ft.

Brazoria County

Texas Co. No. 1 Robbins, J. W. Brougham Sur. 11¾-in. csg. 4,950 ft. T.D.; W.O.C.

Calhoun County

Benedum & Trees No. 1 Roemer Est., John T. Oggsberry Sur. 13-in. csg. 1,567 ft.; T.D. 7,106 ft.; cmtd. protection csg.; W.O.C.

Continental Oil Co. No. 1 Austin Estate, sec. 12, Blk. H. P.B. 8,521 ft.; pulling csg.

Chambers County

Sun Oil Co. No. 2 Hamilton, J. T. White Sur. Loc.

Colorado County

Coyle-Concord & Sterling No. 1 Mary E. South, I.&G.N. Sur., sec. 41. 10¾-in. csg. 755 ft.; drlg. shale 4,730 ft.

Fayette County

Paul Teas No. 1 Clem Vnklarek, S. Millet Sur. Drlg. sh. 3,800 ft.

Galveston County

Shell Pet. Corp. No. 1 Maco Stewart, Spillman Sur. Drlg. shale 8,594 ft.; 9⅝-in. csg. 7,707 ft.

Grimes County

Crook Bros. No. 1 Greer, B. D. O'Conner Sur. S.D. 3,200 ft.

Hardin County

Republic-Houston Oil Co. No. 1 Brooks. T.D. 6,982 ft.; 7-in. csg. 6,953 ft.; blew out; caught fire; cratering; est. 50,000,000 ft. of gas and 2,500-3,000 bbls. of oil.

Republic-Houston Oil Co. No. 2 Brooks, G. W. Brooks Sur. (relief well). 20-in. csg. 63 ft.; drlg. sandy shale 4,817 ft.

Harris County

Bunte O. & G. Co. No. 1 Graves, C. Walters Sur. 10-in. csg. 755 ft.; drlg. sh. 5,439 ft.

D. B. Cherry et al No. 1 Bert J. Dodge, Josiah Harrell Sur. Spudded.

Stanolind O. & G. Co. No. 1 Angelo Candelari Reels and Trobough Sur. 10¾-in. csg. 1,404 ft.

Jackson County

Steinberger Pet. Corp. No. 1 Drushel, F. Rodriguez Sur. T.D. 7,155 ft.; P.B. sdtk.; drlg. shale 6,530 ft

Jefferson County

C. W. Mephail No. 2 B. W. Owens, Joseph Grigsby Sur. Spudded 240 ft.; S.D.

Sun Oil Co. No. 1 Acorn, sec. 103. Drk.

Sun Oil Co. No. 1 J. E. Broussard, W. B. Burton Lge. Derrick.

Lavaca County

Cole Pet. Co. No. 1 Reed-Nollkamper. A. Smothers Sur. S.D. 2,395 ft.

Liberty County

J. C. Mayo No. 1 K. Moore, J. F. De Romayor Sur. Drk.

Matagorda County

Cockburn Oil Co. No. 8 Hawkins. D. McCarthy Sur. Drlg. sh. 4,110 ft.

Continental Oil Co. No. 2 Robbins, J. C. Franz Sur. Location.

Victor H. Driscoll No. 1 Griffith, L.&G.N. Sur. No. 18. Abd. 2,965 ft.

Fetts & Harris No. 1 Pierce, Lot 23, W. E. Wallace Sur. S.D. 2,192 ft.

Texas Gulf Prod. Co. (H. M. Smith) No. 2 Wadsworth, S. R. Fisher Sur. S.D. 9,002 ft. Abd.

Montgomery County

Chapman No. 1 Foster, D. Pevy House Sur. Drk.

Red Bank Oil Co. No. 1 Central Coal & Coke Co., T. P. Whitmore Sur. Coring sand 3,667 ft.

Orange County

Tide Water Oil Co. No. 1-A E. W. Brown, Welsey Dykes Sur. Drlg. sh. 6,812 ft.

Polk County

Peyton No. 1 McDonnald, P. J. Menard Sur. Drk.

Refugio County

Benedum & Trees No. 1 R. H. Welder, Juan Pabedan Sur. Coring sand 6,912 ft.

E. W. Price et al No. 1 Wood, Antastacio Roogas Sur. T.D. 6,105 ft.; abd.

Victoria County

Plymouth Oil Co. No. 1 J. J. Welder, S. A. Balding Sur. Drlg. sh. 4,619 ft.

Walker County

L. M. Gay et al No. 1 M. E. Stubblefield, G. Bodilla Sur. Abd. 3,015 ft.

Wharton County

Felmont Oil Corp. No. 1 G. Mitchell, D. Wade Sur. Drlg. shale 3,015 ft.

Pure Oil Co. No. 1 G. A. Duffy, sec. 107, E.G.R.R. Sur. T.D. 1,568 ft. Running 10¾-in. csg.

Pure Oil Co, No. 1 Topeka Natl. Bank, 160-ac. tr., W. F. York Sur. R.U.

Texas Crusader Oil Co. No. 1 fee, J. Smith & McKenzie Sur. 10¾-in. csg. 1,234 ft.; 7-in. csg. cmtd. 5,562 ft.; 7-in. cmtd. on bottom; perf. csg. 5,552-61 ft.; I.P. 5 bbls. per hour, ¼-in. choke.

S. W. TEXAS WILDCATS

Atascosa County

Atascosa Trust No. 1 Domsch, 160 ft. S line, 300 ft. E line 152-ac. lease, T. W. Russel Sur. 1,222. T.D. 4,010 ft.; P.B. 3,500 ft.; acidized with 2,000 gals.; swabbing.

Helvetia Oil Co. No. 1 S. Pratt, 1,400 ft.

NW line, 3,470 ft. SW line, J. de la Garza Sur. T.D. 3,116 ft.; P.B. 3,000 ft.; swabbing.

Bastrop County

Paul Teas No. 1 Vinklarek, S. Millet Lge. Laying wtr. line; drlg. shale 3,568 ft.

Bee County

W. V. Bowles No. 1 Mengers, W. Allen Sur. Drlg. 1,200 ft.

L. Glasscock No. 1 Ablinger, SE cor. 110-ac. tr., Ryan Sur. S.D. 304 ft.

Randon Oil Co. No. 1 Handy Bros., J. Tool Sur. Drk.

Joe White No. 1 McKinney, Spencer Morris Sur. Derrick.

Burleson County

Red Bank Oil Co. No. 1 Grann, 2,875 ft. S line, 1,500 ft. E line, E. Santel Sur. T.D. 4,886 ft.; plug back.

Caldwell County

Adams and Lyles No. 1 Dale, W. Spiller Sur. R.U.

Brown Drlg. Co. No. 1 Pope, J. D. Rains Sur. R.U.

Elam et al No. 1 Francis, 450 ft. SW and SE lines, 291-ac. tr., Young Sur. Sd. 1,740-45 ft.; set csg. 1,737 ft.; milling.

Swearingen Oil Co. No. 2 Davis, Floyd Sur. Drlg. 1,027 ft.; no report.

Duval County

Frank Buttram No. 1 Nueces Land & Livestock Co., 1,350 ft. N line, 1,700 ft. E line, Sur. 102. Drlg. shale 1,638 ft.

Conservative Oil Co. No. 3 D.C.R.C., N½ Blk. 17, Sur. 15. Loc.

Frank Gravis No. 2 Gravis, 3,050 ft. SE line, 990 ft. SW line, Sur. 250. S.D. 2,700 ft.

Hamil & Smith No. 2 Benavides, Subd. 1, Mesquite Gr. Abd. 3,500 ft.

Intrepid Oil Co. No. 3 Parr, 723 ft. S and E lines, Sur. 226. T.D. 4,760 ft. Swabbed salt water, coring ahead.

Shell Pet. Corp. No. 1 Taylor, 330 ft. S and W lines, NW¼, Sur. 214. Set surf. csg. 114 ft.; T.D. 3,156 ft.

Edwards County

Phillip Miers & Turney No. 1 Turney, sec. 164, C.C.S.D.&R.G.N.G. R.R. Sur. Drlg. 837 ft.; no report.

Plateau Oil Co. No. 1 R. L. Hatch, sec. 66, J. W. May Sur. M.I.M.

Goliad County

California Co. No. 1 Langrebe, 465 ft. N and E lines tract, Thomas Hancock Sur. T.D. 5,050 ft.; P.B. 4,797 ft. to test sand.

Sun Oil Co. No. 1 Fromme, A. Martle Sur. Loc.

Zeni Oil Co. No. 3 Lutenbacher, 330 ft. N and W lines, SE¼, sec. 25. T.D. 5,399 ft.

Gonzales County

M. S. Holliday No. 1 Edwards, W. W. Pace Lge. Loc.

Lull No. 1 Bodka, McClure Sur. S.D. 2,200 ft.

Hidalgo County

Helen K. Maxwell No. 1 Hidalgo Wtr. Dist. No. 2, Lot 11, Blk. 20. T.D. 731 ft.; pmpg.

Jim Hogg County

Theo. Hicks No. 1 Kohler, sec. 9, Noriscitas Gr. T.D. 30 ft.; W.O.C.

Locke Purnell and Gifford Oil Co. No. 1 Gallagher, Blk. 128, Pippin Division, Randado Gr. Spudded.

Henry Swift et al No. 1 Holbien, Blk. 58, sec. 3, Las Animas Gr. R.U.

Jim Wells County

Camp Drlg. Co. No. 1 Jane Schallert, Presenos De Abago Sur. Drlg. 812 ft.

Gist & Graddy No. 1 Owens, 660 ft. N line, midway E and W lines, Sur. 151. S.D. 4,900 ft.

La Jita Corp. No. 1 Schallert, 3,919 ft. S line, 2,097 ft. E line tr., Las Presenos Abajo Gr. Drlg. 1,380 ft.

Putnam & Stewart No. 1 Canales, C Blk. 32, Mosser Subd., Canales Est. Drlg. shale 1,585 ft.

Karnes County

Luling O. & G. Co. No. 1 Wheeler, Carlos Martinez Sur. Spudded to 60 ft. S.D.

Kleberg County

E. B. Clark No. 1 Kivlin, 150 ft. N and E lines, Blk. 8, sec. 39, Kingsville Town & Improvement Subd. Tstd. S.W. on D.S.T.; S.D.; T.D. 2,142 ft.

LaSalle County

Kennedy & Johnston No. 1 Gilman & Wildenthal, 330 ft. NW and NE lines, 140-a. tr., Sur. 283. Rebldg. drk.

Roy Shipman No. 2 Coleman, 330 ft. S line, 2,970 ft. W line, 500-ac. tr., James Sur. T.D. 2,132 ft.; fsg.

W. H. Vernon No. 1 Las Abias ranch, 150 ft. N line, midway E and W lines, sec. 726. Drlg. 413 ft.

Live Oak County

Barber & Miller No. 1 Blanks, A.B.&M. Sur. No. 103. S.D. 650 ft.

J. H. Durbin No. 4 Marbach, S. Hays Sur. Drlg. 537 ft.

R. Feltner No. 1 Sanger, 990 ft. S line, 330 ft. W line, E½, Sur. 391. Drk.

O. W. Killam No. 1 Schultz Live Stock Co., 1,320 ft. S line, 640-ac. tr., 150 ft. W of highway, Hefferman Sur. Drlg. 1,230 ft.

Simmons O. & G. Co. No. 5 McGriff, Louis Romaro Sur. T.D. 2,812 ft., 5½-inch csg. on bottom. W.O.C.

Sun Oil Co. No. 1 James, Pat McGlover Sur. Loc.

Maverick County

Rio Dev. Co. No. 1 Winchester Kelson, 150 ft. W line, 750 ft. S line, E½, 130-ac. tr. S.D. 305 ft.

Thornton & Underwood No. 1 Thompson, 2,000 ft. SW line, 750 ft. SE line, Uvalde Co. Sch. Ld., Sur. 2. Derrick.

McMullen County

F. R. Floyd et al No. 1 Piasecik, 150 ft. N and E lines, Blk. 2, Garner Sur. T.D. 1,135 ft.

Hagen Stewart Oil Co. No. 1 Kunz, M. Hely Sur Spudded.

W. P. Howard No. 5 Claunch, M. Hely Sur. 342 S.D. 760 ft.

C. I. Jennings No. 1 Regan, 1,070 ft. S. Frio River, 330 ft. W line, 642-a. tr., Haley Gr. S.D. 1,026 ft.

Magnolia Pet. Co. No. 1 Teal, 10,297 ft. N line, 3,310 ft. E line, Kuykendall Sur. Drlg. 2,237 ft.

E. D. Mathis No. 1 Fahler, 2,000 ft. S line, 75 ft. E line, 500-ac. tr. Abd. 818 ft.

I. Taylor No. 1 Lark, 150 ft. S and W lines, Lot 72, Scrugham Sur. T.D. 973 ft.; R.U.

Medina County

N. C. Johnson No. 1 Taylor, 360 ft. E line, 168 ft. S line, 320-ac. tr., Castro Sur. 136. T.D. 400 ft.; S.D.

Thomas & Rife No. 1 Zadick, 2,800 ft. N line, 250 ft. W line, Lubbock Sur. 509. T.D. 3,332 ft.; Abd.

G. N. Witting No. 1 Hondo Natl. Farm Loan Assn., Geo. Studer Sur. 214. Coring 1,096 ft.

Nueces County

J. T. Cox et al No. 1 Harvey, 150 ft. S and E lines, Sh. 11. Drlg. 4,412 ft.

G. M. Richardson No. 1 Carter, cen. NW¼, SE¼ sec. 8, Laurells Farms Trs. Drk.

San Patricio County

Eleanor Oil Co. No. 1 Kline, Lot 5, Blk. "C," Coleman-Fulton Pasture Subd. Drlg. 3,119 ft.

Plymouth Oil Co. No. 2-D Welder, 466 ft. N and E lines, sec. 4. T.D. 6,500 ft.; 7-in. csg. 5,533 ft.

Trinity Drillers, Inc., No. 1 Mayfield, Lot 11, Roos Subd. S.D. 4,200 ft.

Starr County

J. F. Anderson No. 1 Yzagierre, Tr. 1, Porc. 79, J. of Camargo. Coring 2,339 ft.

J. H. Clopton No. 4 Roos, 330 ft. S and W lines, Blk. 5, Porc. 91. Drlg. 2,806 ft.

F. Davenport No. 1 Kelsey-Bass, 534 ft. S line, N 585-ac. tr., 2,856 ft. E line, Porc. 87. Set 1,000 ft. of surf. csg. Drlg. shale 1,860 ft.

Davenport-Slick-Urschel No. 1 Slick Est., Davenport ranch, sec. 485. Drlg. shale 1,201 ft.

A. G. McMath No. 1 Guerra, Blk. 31, Porc. 55. Abd. 503 ft.

Webb County

Mid-Continent Pet. Corp. and Oklahoma Co. of Texas No. 1 Laubscher, 330 ft. NE and NW lines, NW¼, sec. 1,394. S.D.; wtr.

Lu-Tex Oil Co. No. 1 Lone Star, Porc. 13; (W.O.). Fsg. 2,317 ft.

Willacy County

Shell Pet. Corp. No. 1 Yturria Land & Cattle Co., 990 ft. S and E lines, Share 64, San Juan de Carricitos Gr. T.D. 7,662 ft.; flowed 232 bbls. per day through ¼-inch choke.

Williamson County

H. H. Coffield et al No. 1 Thorne, 600 ft. N line, 330 ft. W line, 76-ac. tr., J. Vevil Sur. S.D. 800 ft.

S. W. TEXAS PROVEN

Voss—Bee County

Devonian Oil Co. No. 2 Voss, 660 ft. N No. 1, S. May Sur. Loc.

R. B. Singer No. 2-A Voss, 330 ft. E line, 990 ft. N line, 101-ac. tr., S. May Sur. T.D. 3,996 ft. I.P. 6 bbls. per hour on gas jet.

Weigand Bros. No. 1 Bergel, 330 ft. NE and NW lines, E. C. White Sur. T.D. 4,006 ft.; showed 270 ft. of oil on D.S.T.; I.P. 43 bbls. per day through ⅛-inch choke.

Alta Verde—Brooks County

Nordan, Morris & Nash No. 3 Singer, Sur. 312. Abd. 3,015 ft.

Driscoll—Duval County

Continental Oil Co. No. 11-A Driscoll, Sur. 448. Drlg. 3,250 ft.

El Mesquite—Duval County

Rogers & Rogers No. 1 Valdez, 150 ft. NE and SE lines, 80-ac. tr., Mesquite Gr. Cored oil sand at approx. 2,800 ft. Running 7-inch csg.

Salt Flat—Caldwell County

Chiquita Oil Co. No. 2 Hickman, G. Hinds Sur. 2,608 ft.; pulled tubing to work over.

Hoffman—Duval County

Bridwell Oil Co. No. 3 Sutherland. Drlg. 1,013 ft.; swabbing.

Duval Oil Co. No. 6 Hoffman. T.D. 2,873 ft.; 7-in. csg. 2,867 ft.

Rogers & Rogers No. 8 Hoffman, 115-ac. tr., Sur. 118. T.D. 2,909 ft.; 7-in. csg. 2,894 ft.; I.P. 65 bbls. per day on gas jet.

Labbe—Duval County

Stanolind and Mills Bennett No. 1 Yates, 2,149 ft. S line, 2,800 ft. W line, sec. 560. Loc.

Loma Novia—Duval County

Bridwell Oil Co. No. 12-A Hubbard, Sur 71. T.D. 2,766 ft.; I.P. 360 bbls. per day on ½-inch choke.

Bridwell Oil Co. No. 6-D Hubbard, Sur. 72. Drlg. 2,337 ft.

Duval Oil Corp. No. 24 Bishop, Sur. 57. T.D. 2,587 ft.; 5-in. csg. 2,571 ft. Bailing.

Humble O. & R. Co. No. 19-A Hubbard, Sur. 84. Drk.

Humble O. & R. Co. No. 20-A Hubbard, Sur. 84. Drk.

Humble O. & R. Co. No. 17 Ruiz, sec. 553. Drk.

Joe Palmer No. 1 Hahl, Sur. 61. S.D. 2,-339 ft.

Pitkin & Goldston No. 4 Breeding, Sur. 57. Drk.

Reynosa Oil Co. No. 6 Williams, Sur. 75. Drk.

Shell Pet. Corp. No. 10 Hubbard, Sur. 77 Drk.; M.I.M.

Texas Co. No. 16 Bishop, Sur. 57. T.D. 2,572 ft.; 7-in. csg. 2,563 ft.; I.P. 87 bbls. per day.

Texas Co. No. 3 B. Ruiz, 330 ft. W, 284 ft. S, lower NE cor. lse., Sur. 41. T.D. 2,747 ft.; 7-in. csg. 2,729 ft. I.P. 50 bbls. per day.

Loma Vista—Duval County

Pan American Pet. Co. No. 1-H Welder, 330 ft. N and W lines, 160-ac. tr., Sur. 103. T.D. 3,006 ft.; hole bridged at 1,-000 ft.; C.O.

Shell Pet. Corp. No. 1-B Welder, 330 ft. S line, 2,590 ft. W line, Sur. 69. T.D. 3,242 ft.; P.B. 2,874 ft. Recementing.

Palangana—Duval County

Frank Gravis No. 3-A Scharlett, Sur. 255 T.D. 2,744 ft.; 7-in. csg. 2,728 ft.; went dead, reset screen to test.

Peters—Duval County

Tom Graham No. 1 Sutherland, Sur. 188. Tstd. dry gas 2,459-65 ft.; set csg. 2,-500 ft.; to perf. 2,342-48 ft.; T.D. 3,-390 ft.; P.B. to perf. 2,459-65 ft.; completed for gas well.

Mid-Continent Pet. Corp. No. 1 Peters, 120-ac. tr., Sur. 159. T.D. 2,629 ft. Fishing.

Windsor Oil Co. No. 4-B Peters, 660 ft. N No. 3-B, 330 ft. E line, sec. 34. R.U.

Seven Sisters—Duval County

S. B. Cloyes No. 2 Serna, Sur. 384. R.U.

Humble O. & R. Co. No. 25 Smith Sur. 382. T.D. 2,469 ft.; I.P. 30 bbls. per hr.

Humble O. & R. Co. No. 10 Wright Sur. 118. Drlg. 1,680 ft.

Humble O. & R. Co. No. 11 Wright Sur. 118. R.U.

Illinois Pet. Co. No. 4 Hazelwood, Sur. 110. R.U.

Ed Leach No. 2 R. Serna, Sur. 384. Drlg. 1,830 ft.

Westheimer & Daube No. 18 Campos, Sur. 224. Loc.

North Pettus—Goliad County

Bostex Oil Co. No. 1 Lackey, 1,650 ft. NW line, J. Gomez Sur., 1,660 ft. SW of No. 3-A. Drlg. 1,927 ft.

Diamond Halff Oil Co. No. 4-C Gillette, J. Gomez Sur. Abd.

Magnolia Pet. Co. No. 4 Gillette, 375 ft. E of No. 1, J. Gomez Sur. T.D. 3,684 ft.; I.P. 48 bbls. per day.

Zoborowski—Guadalupe County

Louis Crouch No. 2 Zoborowski, J. D. Clements Sur. 14. Cg. 2,655 ft.; P.B. to 2,561 ft.

Mercedes—Hidalgo County

Union Sulphur Co. No. 7 American Rio Grande L. & I. Co., 4,000 ft. SE of No. 1, Farm Tr. 2,309, Blk. 59. T.D. 7,597 ft.; retstd. 7,578-88 ft.; no show; S.D.

Union Sulphur Co. No. 10 American Rio Grande L. & I. Co., Blk. 50, Tr. 2,418. N. Caprisallo Dist. Cg. shale 7-817 ft.

Mestanos—Hidalgo County

McCullom Expltn. Co. No. 1 Harding, Lot 11, Blk. 94, Missouri-Kans. L. & I. Co., Subd. Mestanos Gr. Set csg. 1,250 ft.; drlg. shale 6,000 ft.

Samfordyce—Hidalgo County

Harrison and Denvers No. 2-A Villalon, Tr. 252, Porc. 39. R.U.

Henne-Winch-Fariss—Jim Hogg County

Sam Payne No. 1 Holbien, 150 ft. N and W lines, Blk. 10, Share 3, Las Animas Gr. R.U.

Bentonville—Jim Wells County

La Jita Corp. No. 1 Frame Bowers, 330 ft. N and E lines, sec. 14. Drk.

Stanolind O. & G. Co. No. 2 Blundell, 330 ft. N line, 330 ft. E line, NE¼, SW¼, sec. 16. T.D. 5,417 ft.; P.B. 5,358 ft.; 7-in. csg. 5,325 ft.; completed for gas well.

Stanolind Oil & Gas Co. No. 1 Pope, sec. 13. T.D. 5,348 ft.; removed 720 ft. of oil on D.S.T.; 7-in. csg. 5,344 ft.; prepare to deepen.

Callihan—McMullen County

Agarita Oil Co. No. 3 Lark, Blk. 58, Scrugham Sur. Set csg. 948 ft.; T.D. 953 ft.; swabbing.

Comet Oil Co. No. 1 Lark, 150 ft. S and W lines, Blk. H, Scrugham Sur. Set csg. 1,028 ft.; I.P. 20 bbls. per day pumping.

Travellers Oil Co. No. 3 Lark, 225 ft. E of No. 1, Scrugham Sur. T.D. 1,033 ft.; I.P. 23 bbls. per day pumping.

Agua Dulce—Nueces County

Texon Royalty Co. No. 1 Elliff, 466 ft. E line, 2,194 ft. S line tr., Longorio grant. T.D. 6,557 ft.; 7-in. csg. 5,800 ft.; tstd.; no show; S.D.

Clara Driscoll—Nueces County

Santa Clara Oil Co. No. 1-A Sevier, Wm. Gamale Sur. Spudded.

Flour Bluff—Nueces County

Barnsdall Oil Co. and Flour Bluff Corp. No. 2 Phillips, C Lot 12, sec. 55. Drlg. shale 4,536 ft.

Costa Oil Co. No. 1 Henderson, 530 ft. E line, 660 ft. S line, Lot 10, sec. 48. R.U.

Gem Oil Co. No. 1 J. T. Smith, Lots 20 and 21, sec. 47. Coring salt water sand 6,457 ft.

S. Paul No. 1 Moulter, Blk. 16, sec. 41, Encinal Garden tracts. Loc.

Saxet Heights—Nueces County

Callaham Oil Co. No. 1 Best, 5-ac. tr., Ehlers Garden Trs. Sd. 4,086½-91 ft.; set csg. 4,091 ft.; S.D. 4,132 ft.

Hamil & Smith No. 2 Johnson, 330 ft. S line, 160 ft. W line tr., Villareal Gr. T.D. 4,072 ft.; 5½-in. csg. 4,067 ft.; I.P. 195 bbls. per day through 11/64 inch choke.

W. H. Harrison No. 1 fee, Villareal Gr. T.D. 4,071 ft.; tstg. sd. 4,053-71 ft.

McGrew et al No. 1 Kelly, 755 ft. N line, midway E and W lines, 9.3-ac. tr. Drlg. 3,930 ft.

W. D. Moore No. 2 Lackey, 250 ft. NE line, midway SE and NW lines, 14.51-ac. tr. T.D. 4,087 ft.; comp., no gauge.

Morgan Bros. No. 2 Bender, Blk. C, Harbor View Estates. T.D. 4,085 ft.; failed to flow.

W. N. Paul No. 2 Schallert, cen. Blk. "C," Harbor View Addn. S.D. 1,800 ft.; repts.

Pedernal Oil Co. No. 1 John, Blk. 14, Oak Park Addn. S.D. 4,110 ft.; orders.

Pedernal Oil Co. No. 1 McCaughan, cen. Blk. 17, Oak Park Addn. Set surf. csg. 500 ft.; no report.

Port O. & G. Co. No. 4 Cohen, 1,066 ft. W of No. 2. Drlg. 3,968 ft.

Port O. & G. Co. No. 2 Gibson, Lots 7 and 8, Blk. D, Harbor View Estates. T.D. 4,069 ft.; 7-in. csg on bottom.

J. D. Proctor No. 1 Simonton, 100 ft. E line, 68 ft. N line, 1-ac. tr., Lots 46 and 47 Country Club Pl. Set surface csg.; S.D.

Renwar Oil Corp. No. 1 Guaranty Title & Trust Co., Lot 9, Blk. 12, Villa Gardens. Perf. 4,084-86 ft.; S.D.

Renwar Oil Corp. and Maryland Corp. No. 1 Meany, 330 ft. N and E lines tr. T.D. 4,080 ft.; 7-in. csg. 4,070 ft.; perf. csg. 4065-69 ft. Completed no gauge.

Taylor Pet. Co. No. 1 McBride, 660 ft. W No. 1 Robinson. T.D. 4,086 ft.; setting csg.

Saxet—Nueces County

R. B. Bryant No. 1 Fred Frank, 330 ft. S and E lines, Share C, Frank Partition, Sur. 416. T.D. 5,817 ft. W.O.C.

R. B. Bryant No. 2 Frank, Share "C," Frank Partition, Sur. 416. Set surf. csg.; T.D. 5,831 ft.; 5-in. csg. 5,825 ft., testg.

Paul Benedum (H. D. Carpenter) No. 1 Harmon, 330 ft. S and E lines, 50-ac. tr., G. Frank Sur. T.D. 5,838 ft.; 7-in. csg. 5,838 ft.; I.P. 300 bbls. per day.

W. W. Chapman No. 4 Morgan-Clark, NE¼, Sur. 405. Coring 6,335 ft.

W. W. Chapman No. 5 Morgan-Clark, 1,650 ft. S line, 330 ft. E line, NE¼, sur. 405. Drlg. 6,341 ft.

Great States Oil Corp. and Violet Oil Co. No. 3 McGregor-Belk, 676 ft. E line, 330 ft. N line, 73.5-ac. tr., Sur. 311. T.D. 5,821 ft.; completed, no gauge.

Great States Oil Corp. and Violet Oil Co. No. 4 McGregor-Belk, 330 ft. S and W lines lse., Sur. 311. T.D. 5,777 ft. Fshg.

Great States Oil Corp. No. 3-G Morgan, Sur. 403. Drlg. 5,780 ft. No report.

Hiawatha Oil Co. No. 1 Hutchins-Stillwell, 175 ft. W line, 1,200 ft. S line, Sur. 311. T.D. 4,864 ft.

Hiawatha Oil Co. No. 5 Hutchins-Stillwell, 330 ft. W line, Blk. 30, Sheppard Farm Lots, Drlg. sh. 4,787 ft.

Hiawatha Oil Co. No. 1-B Smith, Sur. 311. Drlg. 5,438 ft.

Holliday Oil Co. No. 5 Griffith, 330 ft. N line, 2,424 ft. E line, 100-ac. tr., Frank Sur. Drk.

Houston Oil Co. No. 1 fee, Sur. 552. Drlg. 4,630 ft.

Houston Oil Co. No. 5-A Harrell, 660 ft. S of No. 3-A, Blk. 19, Sheppard Farm Lots. R.U.

Houston Oil Co. No. 6 McGregor, 137.59-ac. tr., Sur. 552. T.D. 5,827 ft.; 7-in. csg. 5,814 ft.; I.P. 58 bbls. in 6 hrs. through 2/16 inch choke.

Houston Oil Co. No. 7 McGregor, Sur. 311. Drlg. 1,300 ft. (corrected).

Houston Oil Co. No. 12 Morgan, 330 ft. S and W lines lse., sec. 7, Rge. 5, T.D. 4,424 ft. W.O.C.

Maryland Oil Corp. No. 2 Rand Morgan, 330 ft. N line, 990 ft. W line, 234-ac. tr., Sur. 315. Sd. 4,420-37 ft.; no show; rmg. to test; no report.

Mills Bennett Prod. Co. No. 1 Kassner, 990 ft. S line, 330 ft. E line, 100-ac. tr., SE¼ Sur. 409. T.D. 4,100 ft.; I.P. 253 bbls. per day.

North Star Oil Co. No. 3 Humphrey, Stevens Sur. T.D. 5,827 ft.; comp.; no gauge.

North Star Oil Co. No. 6 Humphrey, 80-ac. tr., Stevens Sur. S.D. 5,840 ft.

Pan American Pet. Co. No. 5-A Rand Morgan, 99-ac. tr., Sur. 403. Set surf. csg.; T.D. 5,833 ft.; 7-in. csg. 5,833 ft.; W.O.C.

Phillips Pet. Co. No. 5 Morgan, 60-ac. tr., E½, SE¼, sec. 405. Coring 3,840 ft.

Renwar Oil Co. and C. Andrae No. 1 Franks, 330 ft. S of highway, 330 ft. W line, 28.3-ac. tr., Frank Sur. 416. Drlg. 5,784 ft.

Richardson Pet. Co. No. 3 Quiros, Blk. 40, Sheppard Farm Tr. (W.O.), P.B.T.D. 4,-798 ft.; old T.D. 4,879 ft.; M.I.M.

Southern Minerals Corp. No. 10 Bliss, 120-ac. tr., Stevens Sur. T.D. 5,825 ft.; 7-in. csg. 5,815 ft.

Oso Drillers, Inc., No. 4 Roark, 660 ft. E line, 1,200 ft. S line, 106-ac. tr. R.U.

Pan American Prod. Co. No. 1-F Rand Morgan, 330 ft. S and E lines, NW¼, sec. 405. T.D. 5,888 ft.; P.B. to sdtk. 4,-500 ft.; sd. S.W. sd. 4,900 ft.; side-tracked; drlg. 3,840 ft.

Part O. & G. Co. No. 2 Gibson Blk. "D." Drlg. 2,373 ft. No report.

Phillips Pet. Co. No. 4 Hutchins, Blk. 29, Sheppard Farm Tracts. T.D. 5,842 ft., 7-inch csg. on bottom.

Phillips Pet. Co. No. 2 Rand Morgan, 330 ft. N and E lines, E½, SE¼, Sur. 405. T.D. 5,834 ft.; I.P. 9 bbls. per hour.

Phillips Pet. Co. No. 3 Morgan, 330 ft. N and W lines, 60-ac. tr., Sur. 405. T.D. 5,836 ft., 7-inch csg. on bottom.

Phillips Pet. Co. No. 4 Morgan, 193 ft. W line, 330 ft. S line, 60-ac. tr., Sur. 405. Drlg. 3,813 ft.

Phillips Pet. Co. No. 6 Morgan, 990 ft. N line, 330 ft. W line, 60-ac. tr., Sur. 405. Drlg. 4,830 ft.

Renwar Oil Corp. No. 2 Rand Morgan, 990 ft. W line, 330 ft. N line, 80-ac. lse., Sur. 315. T.D. 4,449 ft.; comp., no gauge.

Republic Nat. Gas Co. No. 5-B Baldwin, Blk. 19. T.D. 4,086 ft.; running csg.

Richardson Pet. Co. No. 2 Harrell, 330 ft. N and W lines, Blk. 33, Sheppard Farm Lots T.D. 5,845 ft.; oil sd.; perf. csg.; comp., no gauge.

Southern Minerals Corp. No. 6 Isensee, 330 ft. N line, 990 ft. W line, 235-ac. tr., C. Land Sur. 404. T.D. 6,390 ft.; sdtkd.; drlg. new hole 5,800 ft. No report.

Texon Drilling Co. No. 2 Isensee, 150 ft N line, 112 ft. W line, 13.44-ac. tr., C. Land Sur. 404. Spudded.

Texon Drlg. Co. No. 2 Kocurek, Ward Sur. 316, Oil sd. 4,401-11 ft. and 4,527-42 ft.; drlg. plugs; I.P. 104 bbls. per day, 5/32 inch choke.

Westgate Oil Co. No. 11 Sturm, Villareal Sur. T.D. 4,075 ft., testing.

Plymouth—San Patricio County

Centennial Oil Co. No. 1 State of Texas Tr. 3, sec. 71, T.D. 5,612 ft.; I.P. 65 bbls. per day, 9/64 inch choke.

Centennial Oil Co. No. 3 State of Texas Tr. 3, sec. 71. T.D. 5,612 ft.; comp.; no gauge.

Centennial Oil Co. No. 4 State of Texas, Tr. 3, 450 ft. S. 77° 31 ft. W, Sur. No. 1 Hunt. Drlg. shale 4,400 ft.

Humble O. & R. Co. No. 3 Berlly, 466 ft. W line, 399 ft. N line, Blk. 1, sec. 5, Fourth Addn. Set 604 ft. of surf. csg. Drlg. 4,075 ft.

Plymouth Oil Co. No. 58-C Welder, 466 ft.; pulled tbg.; I.P. 133 bbls. per day.

Plymouth Oil Co. No. 58-C Welder, 236 ft. N line, 1,256 ft. E line, sec. 49. T.D. 5,516 ft.; I.P. 144 bbls. per day.

Plymouth Oil Co. No. 59-C Welder, sec. 71. T.D. 5,646 ft.; W.O.C.

Plymouth Oil Co. No. 60-C Welder, sec. 50, Welder Ranch Subd. Coring 5,490 ft.

Sun Oil Co. No. 3 Rossen, 326 ft. E line, 466 ft. N line, Lot 7, sec. 35. T.D. 5,-648 ft.; comp.; no report.

Sun Oil Co. No. 2 Rountree, Blk. 34, coring 6,515 ft.

Taft Field—San Patricio County

Humble O. & R. Co. No. 10 Mayo, Wm. Burns Sur. T.D. 4,937 ft.; Comp., no gauge.

Shell Pet. Corp. No. 3 Pullin, Blk. 4, sec 1, T.D. 3,975 ft.; 7-in. csg. set 3,975 ft. I.P. 50 bbls. in 6 hours through 11/64 inch choke.

White Point—San Patricio County

Earl Calloway No. 1 White Point Dev. Co., 330 ft. E line, midway N and S lines, G. Seguin Sur. No. 5. T.D. 4,915 ft.; re-covered 510 ft. of oil and 3 gals. of S.W. on D.S.T. 4,895-4,915 ft. Flowing in pits, no gauge.

Rio Grande City—Starr County

Coreta Oil Co. No. 5 Doyno, Blk. 1, Tr 77-A, Porc. 81. Spudded.

Tech Oil Co. No. 1 Davis, 150 ft. S and W lines, Blk. 15, Tr. 78, Porc. 8. T.D. 1,398 ft.; fishing.

Fech Oil Co. No. 1-B Frank Doyno, 150 ft. S and E lines, Blk. 2, Tr. 77-A, Porc 81. T.D. 1,430 ft.; Abd.

Carolina-Texas—Webb County

E. J. Sawyer No. 2 Webster, 330 ft. S line, 1,980 ft. W line, Sur. 684, Cg. 2,-410 ft.

Laurel—Webb County

Smith & Story et al No. 1 Lloyd, Sur. 28 S.D. 2,350 ft.

Lopez—Webb-Duval Counties

Cole Pet. Co. No. 1 Peters, 330 ft. N and W lines, Sur. 796, Sd. 2,196-2,201 ft.; tstd. S.W.; S.D. 2,574 ft.

Cole Pet. Co. No. 2 Peters, Sur. 795. Drlg. 350 ft.

Magnolia Pet. Co. No. 7 Peal, T.D. 2,157 ft.; I.P. 195 bbls. per day.

Mills Bennett No. 3-A Lopez, Sur. 73, R.U.

Mortimer & Springer No. 4 Jesus Lopez 330 ft. S line, 990 ft. W line, E½, Sh 10-B, Sur. 73, M.I.M.

Starr Dev. Co. No. 3 Peal, Sur. 796. Sd. 3,179-81 ft.; W.O.C.

Star Dev. Co. No. 2 Peal, 660 ft. E of No. 1, Sur. 796. R.U.

Superior Oil Co. No. 10 Billings, Sur. 109. Drlg.

Superior Oil Co. No. 16 Billings, sec. 107. Drlg. 1,012 ft

Texas Co. No. 16 Bishop, Sur. 57. T.D. 2,572 ft.

Magnolia Pet. Co. No. 39 Benavides. T.D. 2,814 ft.; 7-in. csg. 2,808 ft.; I.P. 75 bbls. per day, ½-in. choke.

O'Hern—Webb County

Hamil & Smith No. 5 S. Benavides, Blk. 431, Hale Subd. Drlg. 27 ft.

Starr Dev. Co. No. 1 Benavides, 330 ft. N and W lines, Sur. 173, M.I.M.

E. C. TEXAS WILDCATS

Anderson County

Gulf Oil Corp. No. 1 Ross, Robt Irwin Sur. Elev. 487 ft. Drlg. 8,389 ft.

Angelina County

Ginter et al No. 2 Cape Heirs, 1,725 ft. most northerly S line and 1,325 ft. westerly E line of 1,801-ac. tr., 3 mi. E of Diboll, J. Morin Sur. Drk.

T. L. Harris No. 1 fee, E line Gilliland Sur., 4½ mi. NE of Huntington. Coring 1,175 ft.

C. D. Neff No. 1 Long Bell Lbr. Co., J. F. Gilbers Sur., 6½ mi. NW of Huntington. Drlg. 368 ft.

W. A. Stone et al 1 Southern Pine Lbr Co., B. J. Thompson Sur., 8 mi. SE Lufkin. R.U.

Cherokee County

J. G. Mayo No. 1 W. T. James, J. T. Jones Sur. Moving in material.

Falls County

E. L. Chapman et al No. 1 Grocholski. Drlg. 3,920 ft.

R. M. Hefflin No. 1 T. E. Battle, Marl Sur 3 mi. SW of Marlin. Drk.

Fannin County

Styles & Smith No. 1 R. Stewman, J. W. Clark Sur., 2 mi. SE Trenton. Spud. and S.D.

Franklin County

Atex Oil Co. No. 1 R. L. Jaggers, J. Humphrey Sur., 1½ mi. NW of Winfield, elev. 398 ft. S.D. 3,018 ft.

R. B. & H. Oil Co. No. 1 Phillips, Wm. Birdwell Sur. Top sd. 4,294 ft.; S.D. 4,-330 ft.

Freestone County

Yancey et al No. 1 Scott, Church Lot, H. Awalt Sur. W of Stewartsville. S.D. 600 ft.

Henderson County

Atex Oil Co. No. 1 H. L. Wyatt, 1,966 ft. E and 330 ft. N of 220-ac. tr., S. Sanchez Sur. Drlg. 3,175 ft.

McDougal et al No. 1 E. Price, M. Mathews Sur., 4 mi. S of Trinidad. S.D. 50 ft.

Sparks et al No. 1 Berry, Young Sur., 5 mi. S of Brownsville. O.W.; to deepen.

Hunt County

Penn Oil Corp. et al No. 1 A. B. Manning, 5 mi. NE of Lone Oak, S. Owens Sur. Drk.

Kaufman County

Lester & Duffield No. 1 D. C. Baron, J. T. Taylor Sur., 8 mi. NE of Elmo. Fshg. 5,968 ft.

Nacogdoches County

J. C. Bonhan et al No. 1 Angelina Lbr. Co., in J. Gomez Sur., 14 mi. SE of Nacogdoches, R.U.

Red River County

Abercrombie & Harrison No. 4 Southern Pine Lbr. Co., D. D. Bruton Sur., 1,500 ft. N of No 3. Drlg. plug 167 ft.

F. D. Jones et al No. 1 Monkhouse, John Ware Sur. S.D. 738 ft.

E. Sneed et al No. 1 Hocker-Hughes. S.D. 2,720 ft.

Robertson County

J. E. Mills No. 1 T. Congelosi, C of 75-ac. tr. in G. A. Nixon Sur., 3½ mi. SW of Hearne. S.D. 420 ft.

Rusk County

John W. Merritt No. 1 J. A. Stallings, T. Uszell Sur., 2½ mi. S of East Texas field. S.D. 1,920 ft.

Smith County

Carolyn et al No. 1 Bennett, Robt. Walters Sur., 3 mi. NE of Winona. S.D. 100 ft.

Upshur County

B. L. Watson No. 1 W. O. Irwin, D. Cannon Sur., NE cor. of county. Drk.

EAST TEXAS

(Border Counties)

Cass County

American Liberty Oil Co. No. 1-B Baughs, J. H. Rives Sur. Cg 6,005 ft.

American Liberty Oil Co. No. 1-D Baughs, J. H. Rives Sur. 7-in. csg. cmt. 6,005 ft.; T.D. 6,018 ft.

American Liberty Oil Co. No. 1 G. Stephens, 330 ft. N and 1,020 ft. E. SW cor. J. Garsner Sur. O.T.D. 6,118 ft.; present T.D. 5,900 ft.; P.B. perf. cs. and tstg.

Gulf Prod. Co. No. 1 Dawson et al, NE cor. of tr., J. H. Rives Sur. Loc.

Herman L. Brown No. 7 R. P. Willis, Robt. Trammel Sur. Drlg. 3,937 ft.

W. F. Lacey et al No. 2 Baughs, J. H. Rives Sur. Drlg. 4,408 ft.

Magnolia Pet. Co. No. 1 J. E. George, J. Collum Sur., SE cor. E. E. Hall 60-ac. tr. 7-in. csg. 6,032 ft.; T.D. 6,074 ft.; W.O.C.S.

Magnolia Pet. Co. No. 2 J. E. George, NE Cor. John Collum Sur. Drlg. 4,414 ft.

Magnolia Pet. Co. No. 3 J. E. George, SW cor. John Collum Sur. Drlg. 4,415 ft.

Magnolia Pet. Co. No. 4 J. E. George, NE cor. 141-ac. lse., John Collum Sur. Drlg. 2,100 ft.

Magnolia Pet. Co. No. 4 A. S. Hall, J. Collom Sur., 544 ft. S of N line, 1,250 ft. E of W lines, E. E. Hall tr. Drlg. 5,813 ft.

Magnolia Pet. Co. No. 5 A. S. Hall, J. Collom Sur., 532 ft. S of N line and 440 ft. W of E line of E. E. Hall 60-ac. tr. 7-in. cmt. 6,040 ft.; T.D. 6,070 ft.

Magnolia Pet. Co. No. 6 A. S. Hall, NW cor. 60-ac. lse., John Collum Sur. 7-in. cgs. cmt. 6,068 ft.; T.D. 6,099 ft.

Magnolia Pet. Co. No. 7, NW cor. 60-ac. lse., John Collum Sur. Drlg. 5,822 ft.

Magnolia Pet. Co. No. 2 W. M. Hall, SE cor. Wilson Robinson Sur. 7-in. csg. cmt., 6,045 ft.; T.D. 6,083 ft.

Magnolia Pet. Co. No. 4 Haywood, SW cor. Haywood Tr., John Collum Sur. Drlg. 5,645 ft.

Magnolia Pet. Co. No. 1 J. J. Moore, J. Collom Sur., 330 ft. N, 418 ft. W, SE cor. 118-ac. tr., Drlg. 5,755 ft.

Magnolia Pet. Co. No. 3 Rives, NE cor John Collum Sur. Drlg. 5,420 ft.

Magnolia Pet. Co. No. 4 Rives, NE cor. John Collum Sur. Drlg 5,674 ft.

Magnolia Pet. Co. No. 5 Rives, SE cor. John Collum Sur. Loc.

Magnolia No. 6 Rives, SW cor. 425-ac. tr., Robert Trammel Sur. Drk.

Marathon Oil Co. No. 2 R. P. Willis, 1,039 ft. S of No. 1, S.F.I.W. Sur. Drlg. 5,260 ft.

Marathon Oil Co. No. 3 R. P. Willis, 660 ft. S of Superior A-1 Chew, S.F.I.W. Sur. Drlg. 4,309 ft.

R. W. Norton No. 3 A. S. Hall, NW cor. E. E. Hill 60-ac., John Collum Sur. Will perf. csg. and test; T.D. 6,097 ft.

R. W. Norton No. 1 J. T. Moore, Wm. R. Myers Sur. Cg. 5,870 ft.

Phillips Pet. Co. No. 1 G. E. George, Wm. R. Myers Sur. Location.

Phillips Pet. Co. No. 1 Wartzbaugh, Robt Trammel Sur., 431 ft. S of N line and 490 ft. W of E line. Drlg. 4,137 ft.

Phillips Pet. Co. No. 2 Wartzbaugh, Robt. Trammel Sur., 134 ft. S of N line and 496 ft. W of E line. Drlg. 4,070 ft.

Phillips Pet. Co. No. 3 Wartzbaugh, 438 ft. N and midway between E and W line of lse., Robt. Trammel Sur. R.U.

Showers & Moncrief No. 5 T.H. and Sallie Stalcup, Robt. Trammel Sur. Drk.

Showers & Moncrief No. 2 T. D. and Sallie Stalcup, Robt. Trammel Sur., 330 ft. N line, 854 ft. E line. Comp., flowing 447 bbls. first hour, ¼-in. tbg. choke; T.D. 6,030 ft.

Showers & Moncrief No. 3 T. D. and Sallie Stalcup, Robt. Trammel Sur., 330 ft. N and W lines. Comp., flowing 22 B. P.H., ¼-in. tbg choke; T.D. 6,010 ft.

Showers & Moncrief No. 4 T. D. and Sallie Stalcup, Robt. Trammel Sur., 330 ft. S and W lines. 7-in. csg. cmt. 5,977 ft.; T.D. 5,997 ft.

Showers & Moncrief No. 6 T. D. and Sallie Stalcup, Robt. Trammel Sur., 330 ft. S and 1,338 ft. W line, Loc.

Showers & Moncrief No. 8 T. D. and Sallie Stalcup, Robt. Trammel Sur., midway between E and W line of lse. Loc.

Superior Oil Co. No. A-2 Chew, 466 ft. N and W SE cor. 108-ac. lease, Robt. Trammel Sur. 7-in. csg. cmt. 5,943 ft.; T.D. 5,970 ft.

Superior Oil Co. No. A-3 Chew, Robt. Trammel Sur., 1,399 ft. N. 466 ft. W, SE cor. 108-ac. tr. Drlg. 4,716 ft.

Superior Oil Co. No. A-4 Chew, 1,263 ft. N, 466 ft. E, of SW cor. 108-ac. tr. Drlg. 5,400 ft.

Superior Oil No. 5-A Chew, W.D.&C.C. Track, Robt. Trammel Sur. Drk.

Superior Oil No. 6-A, SW cor. Chew tr., Robt. Trammel Sur. Drlg. 4,188 ft.

Texas Co. No. 2 E. E. Hall, SW cor. 60-ac. tr., James Young Sur. Drlg. 5,387 ft.

Texas Co. No. 3 E. E. Hall, 562 ft. S No 1, James Young Sur. Flowing 67 B.P.H. 1-in. tbg. choke; T.D. 6,098 ft.

Texas Co. No. 1 W. M. Hall, A. Archer Sur. Derrick.

Tide Water No. 1 W. D. Chew, Robt. Trammel Sur., 150 ft. N of S line, midway between E and W lines of 20-ac. lease. Derrick.

Tide Water No. 1 W. D. Chew, on 55-ac. tr., Robt Trammel Sur. Drlg. 3,299 ft.

Tide Water No. 2 C. C. Chew, Robt. Trammel Sur., 20-ac. tr. Drlg. 4,415 ft.

Tide Water No. 2 C. C. Chew, on 55-ac. tr., Robt Trammel Sur. R.U.

United Prod. Corp. No. 2 E. J. Cunningham, on Wilson Robinson Sur. P.B. to 5,975 ft.; dry; T.A.; O.T.D. 6,099 ft.

United Prod. Co. No. 3 J. R. Jones, Ben J. Murray Sur. Loc.

United Gas No. 4 J. R. Jones, 502 ft. N, 3,-420 ft. W. SE cor. Ben J. Murray Sur. Drlg. 3,431 ft.

United Gas No. 5 J. R. Jones on 18-ac. tr., John Collum Sur. Drlg. 2,205 ft.

United Prod. Co. No. 4 F. S. Simpson, on 160-ac., tr., James Young Sur. Drlg. 2,-500 ft.

United Prod. Co. No. 6 J. T. Stewart, John Collom Sur., 330 ft. S of N line and E of W line of Mack & Stewart 81.9 ac. Drlg. 5,855 ft.

Vaughn Prod. Co. No. 4 Willis, S.F.G.W. Sur., SW cor. Comp., flowing 80 B.P.H. ⅝-in. tbg. choke; T.D. 5,980 ft.

Harrison County

W. F. Bridewell et al No. 1 Clapp, P. C. Baker Sur., drlg. 4,520 ft.

Geyer Oil Co. No. 4 Vincent, Chas. Davenport Sur. 6-in. csg. cmt. 2,407 ft.; drlg. plugs.

Hanover, Bergendoll et al No. 1 Buchanan, Wm. McIlvain Sur. T.D. 4,120 ft.; fsg.

Panola County

Danciger O. & R. Corp. No. 1 Tatum, SW cor. A. Bissell Sur. Digging pits. Loc.

A. C. Glassell No. 1 Frost Lbr. Industries, SW cor. Mary S. Potts Sur. Cg. and tstg., 4,890 ft.

Gulf Oil Corp. No. 1 Pierce & Chesbro, J. H. Shahan Sur. 10-in. cmtd. 1,435 ft.; drlg. 4,090 ft.

Logansport P. L. Corp. No. 1 Rushing, M. Smith Sur. T.D. 2,694 ft.; fsg.

Shelby County

H. A. Stebbinger et al No. 1 Pickering Lbr. Co., C. E. Henry Sur. T.D. 5,039 ft.; tstg. 5,000,000 ft. gas with 20 bbls. 50 gravity distillate per day; testing.

F. E. Mulroy et al No. 1 C. A. Hayden, in the D.T.F. York Sur. T.D. 2,030 ft.; M.I. hvy. rig.

Potter & Rubeling C. H. Polly No. 1, Wm. Wisner Sur. Drlg. 2,040 ft.

Red Wing Oil Co. No. 1 C. H. Herton, 54-ac. tr. in J. Dowlin Sur. Drlg. 1,856 ft.

NORTH TEXAS WILDCATS

Archer County

Archer Drlg. Co. No. 1 A. L. Harris, Blk. 60, Harris Subd. Location.

Archer Drlg. Co. No. 1 L. F. Wilson, sec. 32, A.T.N.C.L. Sur. Loc.

L. T. Burns No. 1 M. E. Durham, J. W. Harris Sur., sec. 52. Loc.

L. T. Burns No. 1 Lowery, Ann Scott A-389. Testing sd. 1,493-99 ft.

Bob Elmore No. 1 O. L. Kunkel, T.E.&L. Sur., sec. 2,419 ft. S.D.O. 1,275 ft.

F. E. Haynes No. 1 Coleman, Blk. 46, Brazos CSL A-18. Spudded.

Luggenheim et al No. 1 W. T. Waggoner, sec. 3, H.&T.C. Sur. Drlg. 900 ft.

Clay County

Alexander & Goldsmith No. 1 Byers & Co., sec. 28, Byers Subd. Drk.

Collin County

California Consid. Oil Co. No. 1 Fagg, Jas. Rutherford Sur. Spud and S.D.; wtr.

Port Bolivar O. & R. Co. No. 1 Durning, Wm. Creegar Sur. S.D. 4,065 ft.

Port Bolivar O. & R. Co. No. 1 A. Sherley, G. Starke Sur. Loc.

Sorrell et al No. 1 D. R. Clark, J. Rowland Sur. Drk.

Cooke County

Cain & Chandler No. 1 J. B. Burch, J. M. Williams Sur. A-658. S.D. 1,956 ft.

Hill Christian No. 1 J. T. Donald, J. Guffey Sur. A-1,545. Sd. 2,655-72 ft.; sd. 2,890-2,900 ft.; shot 50 sticks; pumping 100 bbls. oil, 20 bbls. S.W.

B. H. Hilburn No. 1 W. A. Harris, J. Harris Sur. A-502. Spudded.

Long & Wolf No. 1 Hopkins, B.B.B.&C. Sur. A-150. Drlg. 875 ft.

Nair Oil Corp. No. 1 England, J. C. McElroy A-711. S.D. to standardize.

Reed et al No. 1 V. D. Randall, J. Redman Sur. A-874. Testing S.S.O. 2.505-20 ft.

E. R. Robison No. 1 J. Krebs, H. Wilkey Sur. A-1,090. Drlg. 2,130 ft.

Ruwaldt-Couch No. 1 Stacy, J. Clark A-194. Spudding.

Sinclair Prairie Oil Co. et al No. 2 A. C. McCall, H. White Sur. A-1,134. Drlg. 2,070 ft.

Wertheimer et al No. 1 W. A. Erwin, J. Armendaris Sur. A-1,234. Drlg. 1,229 ft.

Denton County

Manning & Moore No. 1 E. L. Darnell Walters Sur. A-1,329. Treating with acid; lime 2,505-12 ft.

Grayson County

Pete Shaner No. 1 Blair, R. H. Deavers Sur. A-313. S.D. 2,000 ft.; repairs.

Jack County

W. H. Hammon No. 1 G. E. Evett, H. Plaster Sur. S.D. 1,809 ft.

Harper Pet. Corp. No. 1 G. F. Brown, S. M. Holderness Sur. A-1,532. Drlg. 1,700 ft.

C. Kadane No. 1 E. F. Smith, S.P.R.R. Sur. A-522. S.S.O. 2,370-75 ft.; testing.

States Oil Corp. No. 1 J. Lowe, J. Hughson Sur. A-256. S.D. 3,470 ft.

Joe A. Worsham No. 1 Lowe, S. Crook Sur. A-148. Drlg. 2,400 ft.

Montague County

H. Bost No. 1 Lemon, S. Little A-417. Location.

Clark-Beckner No. 1 C. W. Bell, sec. 6, M.E.P.&P. Sur. Drk.

T. P. Frost No. 1 Johnson, sec. 6, E.T. R.R. Spudded and S.D.

W. E. Halbert No. 1 Petty, S. A. Southerland A-992. Spud. and S.D.

L. C. Heydrick No. 1 Cliff Dowd, G. W. Browning Sur. A-1,274. Spud. & S.D.

Jim Seeds et al No. 1 Coombs, sec. 18, M.E.P.&P. Sur. S.D.O. 2,340 ft.

Sinclair Prairie et al No. 2 C. Holt, Blk. 45, K.C.S.L. Sur. S.D. 1,700 ft.

Thompson et al No. 1 John W. Holmes, Jas. B. Miller Sur. A-461. Drlg. 1,350 ft.

Wichita County

A. E. Blair No. 1 Cody Est., sec. 311, Waggoner Col. Subd. Pit. Derrick.

W. F. Hamilton No. 1 W. T. Waggoner, S. Holloway Sur. A-533. Drlg. 1,953 ft.

Pete Harmon et al No. 1 J. B. Jamison, J. Deck Sur. A-52. Drlg. 3,268 ft.; S.D.

Melat & Graham No. 1 Munger, Blk. 25, K.W.V.F.V. Sur. Drlg. 3,610 ft.

G. H. Howell No. 1 Foster, sec. 1, H.T. &B. Sur., 900 ft. S.D. water

J. M. Morton No. 1 Housler, J. C. Pike, A-509. Drlg. 3,130 ft.

Wilbarger County

Fain McGaha No. 2 N. N. Waggoner, sec. 27, H.&T.C. Sur., Blk. 4. Drlg. 1,400 ft.

F. A. Lain No. 1 Mrs. D. Coffee, sec. 44, H.&T.C. Sur., Blk. 15. Drlg. 280 ft.

Webb & Stilley No. 1 F. Waggoner, sec. 33, H.&T.C. Sur., Blk. 4. Location.

Young County

S. Caprito No. 1 Mrs. N. Laquey, A. Irvin Sur. A-1,779. Drlg. 3,590 ft.

Art Cox No. 1 J. T. Rogers, J. Ray D-1,628. Drlg. 3,640 ft.

W. D. Eastland No. 1 A. R. Manning, T.B &L. Sur. 3,412. Drlg. 2,720 ft.

Hinson & Tidwell No. 1 Jeffery, T.E.&L. Sur., sec. 467. Drlg. 170 ft.

Rathke Oil Co. No. 1 O. W. Hill, J. C. Graham Sur. A-122. Drlg. 3,860 ft.

Yorktex Pet. Co. No. 1 F. G. Burnett, G W. Hills Sur. A-151. Drlg. 3,400 ft.

WEST TEXAS WILDCATS

Andrews County

Grisham Hunter Corp. No. 1 Ratliff & Bedford. Drlg. 2,900 ft.

R. H. Henderson No. 1 J. E. Parker, sec. 25, P.S.L. Sur. A-43. Drlg. 75 ft.

Borden County

Moore Bros. No. 1 Clayton-Johnson, sec. 20, Blk. 32, Twp. 4n, T.&P. Sur. Top Yates 1,660 ft.; top salt 1,175 ft.; drlg. 1,-800 ft.

Brewster County

F. C. Dodson No. 1 Texas American Synd. sec. 66, Blk. 10, G.H.&S.A. Sur. S.D. 3,035 ft.

Toney Hess No. 1 Mary Deal, sec. 7, Blk. 1, G.T.R.R. Sur., 7 mi. NW of Marathon. S.D. 1,630 ft.

Cochran County

Cascade and Honolulu Oil Corp. No. 1 B B. Duggan, cen. Labour 13, League 5? Oldham County Sch. Ld. Drlg. 4,232 ft.

Crane County

Gulf Oil Corp. No. 2 W. N. Waddell, sec. 18, Blk. B-21. Drlg. 5,931 ft.

Gulf Oil Corp. No. 2 Tubbs, sec. 12, Blk 27-B. Shut in 4,391 ft.; 224 bbls. first 2 hrs.

Gulf Oil Corp. No. 2 McKnight, sec. 9, Blk. B-21. Drlg. 3,175 ft.

Loffland Bros. No. 2 Tubbs, sec. 9, B-27. Drlg. 4,156 ft.

Moore Bros. No. 1 Barnsley, sec. 42, Blk 32, P.S.L. Sur. Drlg. 5,570 ft.

Dawson County

Roy Albaugh et al No. 1 J. Robinson. T.D. 4,964½ ft.; 1,000 ft. oil rising in hole in 24 hrs.; swbd. 15 to 20 bbls. fluid.

Ector County

Continental Oil Co. No. 1 Edwards, sec. 32, Blk. 44, T.&P. Sur. Drlg. 2,566 ft.

Empire G. & F. Co. No. 1-C Cummins, sec. 22, Blk. 45, Twp. 1n, T.&P. Sur. Drlg. 2,958 ft.

Sinclair Prairie No. 1-A Johnson, sec. 42 Blk. 42, Twp. 1s, T.&P. Sur. Drlg. 3,-400 ft.

Stanolind O. & G. Co. No. 2-B Cowden, sec. 10, Blk. 43, Twp. 2s, T.&P. Sur. Drlg. 2,649 ft.

York & Harper No. 1 Slater, sec. 26, Blk. 45, Twp. 1s, T.&P. Sur. Drlg. 3,000 ft.

York & Harper No. 1 York. Drlg. 3,100 ft.

Edwards County

M. I. Phillips & Miers No. 1 Turney, sec 164, C.C.S.D.&R.G.N.G. Sur. Drlg. 741 ft.

Plateau Oil Co. No. 1 Hatch, C SE SW¼ sec. 66, Blk. B, H.E.&W.T. Sur. Drlg. 766 ft.

Fisher County

L A. Daniels et al No. 1 J. J. Nickless. Drlg. 937 ft.

Ellis & Wilbanks No. 1 C. C. Wourland, sec. 15, Blk. 21, T.&P. Sur. T.D. 3,309 ft.; U.R. csg.

Forest Dev. Co. No. 1 A. M. Dry, sec 108, Blk. 2, H.&T.C. Sur. Drlg. 4,060 ft.

Gaines County

Amerada Pet. Corp. No. 1-A Averitt, sec. 228, Blk. G, W.T.R.R. Sur. Drk.

Humble O. & R. Co. No. 1 W. Eubanks, sec. 6, Blk. AX. T.D. 6,192 ft.; P.B. 5,-200 ft. and testing; little gas and oil.

Landreth Prod Co. No 1 Kirk sec. 32. A-21. T.D. 4,870 ft.; P.B. 4,850 ft.; swbg. 40 bbls. oil and 8 bbls. wtr. per day.

Stanolind O. & G. Co. No. 1 D Davis, sec. 18, Blk. A-21. Drlg. 4,027 ft.

Garza County

Gartex Oil Co. No. 2 Post Est., sec. 6, Blk. 5, K. Aycock Sur. Drlg. 1,970 ft.

Glasscock County

California-Honolulu Oil Corp. No. 1 Calverley, sec. 25, Blk. 35, Twp. 3s, T.&P. Sur. Drlg. 2,020 ft.

F. Dodson et al No. 1 Carter heirs, sec. 8, Blk. 33, Twp. 3s, T.&P. Sur. Drlg. 2,541 ft.

Hockley County

Texas Co. No. 1 B. Slaughter, Labour 83, League 38, Zavala Co. Sch. Lds. Drlg. 2,765 ft.

Hudspeth County

Hayman Krupp Oil & Land Co. No. 1 Thaxton, sec. 34, Blk. 74, Twp. 6, T.&P Sur. S.D. 1,476 ft.

Jones County

Archer Drlg. Co. No. 1 Berryhill, Lot 7, L. Moore Sur. No. 1. Drlg. 1,900 ft.

Camp & Grady No. 1 Woodson. Drlg. 1,-160 ft.

R. B. Ferris et al No. 1 Guitar, trustee, sec. 44, Blk. 15, T.&P. Sur., 1 mi. NE of Hawley. Drlg. 1,266 ft.

P. E. Glenn No. 1 Carlton, Subd. 26, McMullen & McGloin Sur. Pits.

Humphrey No. 1 Rushing, sec. 11, G. Martinez Sur. Drlg. 2,472 ft.

H C. Owens et al No. 1 H. Arnwine, N½ sec. 69, B.B.B.&C. Sur. S.D. 634 ft.

Parker No. 1 C. L. Brown, sec. 9, Blk. 2 T.&N.O. Sur. Drlg. 2,400 ft.

L. H. Pearson No. 1 Guitar, 412 ft. N and 400 ft. W of SW¼ sec. 23, Blk. 74, T.&P. Sur. Loc.

J. L. Reeves No. 1 Kelly, C. Martinez Sur., 1½ mi. N of Hawley. Drlg. 770 ft.

Kimble County

Wilcox O. & G. Co. No. 1 H. Spiller, sec 15, Brooks & Burleson Sur., Abst. 80. Drlg. 1,824 ft.

Pecos County

Aero O. & G. Co. No. 1 Bloydes, sec. 50, Blk. 10, H.&G.N. Sur. S.D. 1,300 ft.

Anderson Oil Co. No. 1 White & Baker, sec. 32, Blk. Z, T.C. Sur. Drlg. 1,147 ft.

Cardinal Oil Co. No. 1 White & Baker, sec. 37, Blk. Z, T.C.R.R. Sur. S.D. 803 ft.; set csg.

C. A. Everitt No. 1 W. C. Tyrell, sec. 508, G. Montez & Duran Sur. Drlg. 100 ft.

Kirk et al No. 1 Potts, sec. 6, Blk. 9, H.& G.N. Sur. R.U. spudder.

E R. Minshall No. 1 Banker, sec. 25 Blk. 146, T.&St.L. Sur. T.D. 1,780 ft.; set csg.

Tex-Mex Oil Co. No. 1 McKee, Tr. 7, sec. 24, Blk. 9, H.&G.N. Sur. Set csg.; drlg. 2,041 ft.

S. Thompson No. 1 Elsinore Cattle Co sec. 54, Blk. D, G.C.&S.F. Sur. Drlg. 2,-700 ft.

Trans-Pecos Oil Co. No. 2 Caldwell, 330 ft. S and 730 ft. E, sec. 27, Blk. 50, T.&P. Sur. Spud. and S.D.

Presidio County

Lindeman Bros. Oil Corp. No. 1 J. R. Bledsoe & Badgley, sec. 15, Blk. 351, G.C.&S.F. R.R. Co. Sur., 2¼ mil. NE of Presidio. T.D. 1,660 ft.; R.U.R.

Schleicher County

J. W. Cooper No. 2-B Page, sec. 40, Blk. L, G.C.&S.F. Sur. Pits.

Magnus Oil Co. No. 1 Judkins & Spencer, C SW¼ sec. 4, W. W. Russell, grantee. Elev. 2,209 ft.; S.G. 4,350 ft.; gas sd. 4,956-58 ft.; T.D. 6,527 ft.; P.B. to 5,779 ft.; S.D.

Terry County

J. A. Estes No. 1 F. B. Graham, sec. 23, Blk. T, O.&W.R.R. Sur. S.D. 70 ft.

Uscan Oil Co. No. 1 Brownfield, C N¼ sec. 54, Blk. K, P.S.L. Sur. Drlg. 2,232 ft.

Upton County

R. H. Henderson No. 1 Reese, sec. 16, Blk. 3½, C.C.S.D.&R.G.N.G. Sur. R.U. Machine.

Fred Hogan et al No. 1 R. H. Harris et al, sec. 3, Blk. W, G.C.&S.F. Sur. Drlg. 55 ft.

Ward County

P. Moran et al No. 1 Reynolds, sec. 13, Blk. 5, H.&T.C. Sur. S.D. 850 ft.

Philtop O. & G. Co. No. 1 Pure-Smith, sec. 26, Blk. 34, H.&T.C. Sur. Drlg. 1,000 ft.

C H. Mahres No. 1 P. Wilson. Drlg. 1,-300 ft.

Prince Bros. Drlg. Co. No. 1 Monroe, 330 ft. SW and SE, sec. 52, Blk. 34, H.&T.C. Sur. Drlg. 75 ft.

Texas Pacific C. & O. Co. et al No. 1 Buckner Orphans Home Lands, sec. 3, Blk. 32, H.&T.C. Sur. Drlg. 1,100 ft.

Winkler County

Emperor Oil Co. No. 1 Cross, sec. 4, Blk. B-11, P.S.L. Sur. Loc.

Bert Fields et al No. 1 Walton, sec. 3, Blk C-23. T.D. 1,522 ft.; set csg.

B. Fields et al No. 1 Pure-Cowden, sec. 26, Blk. B-5, P.S.L. Sur. Drlg. 2,800 ft.

Read & Duffey No. 1 Sealey, sec. 8, Blk A, G.M.M.B.&A. Sur. Drlg. 1,525 ft.

Texas Co. No. 1 Halley, sec. 7, Blk. B-11. P.S.L. Sur. T.D. 3,499 ft.; ran packer to shut off wtr.

Yoakum County

Stogner et al No. 1 Roosevelt, sec. 215, Blk. D, John H. Gibson Sur. El. 3,717 ft.; drlg. 5,383 ft.

Texas Pacific Coal & Oil Co. No. 1 Bennett, 660 ft. N and 1,980 ft. W, sec. 678, John H. Gibson Sur. Loc.

Diesel Fuel

(Continued from Page 22)

put into regular power service was a 60-horsepower unit built in St. Louis, Mo., in 1898, after Doctor Diesel's design.

After 1928 diesel sales fell, along with everything else in a depression-stricken world. The upward turn began in 1933, led by the diesel tractor. The tractor was still at the head of the diesel parade in 1935, accounting for 467,441 horsepower. A major factor in keeping tractors to the fore was the increase in great public works projects.

Second to the tractor in diesel installations were stationary power plants, including public utility, municipal lighting and industrial works. "Holding company" legislation was a brake on diesel purchases by public utilities. Outside of the tractor market the general industrial field promises to afford the largest outlet for diesel engines. Sales in the marine field in 1935 totaled 96,505 horsepower, including engines ordered by the United States Navy. Purchases by contractors for road-rollers, power shovels, conveyors, small locomotives, draglines, air-compressors, etc., made up 132,421 horsepower.

Trucking did not provide so large a diesel market as had been expected in 1935, the sales in this division aggregating 86,255 horsepower. The present year is expected to make a better showing. Pleasure boats, too, will provide an increasing market. Use by railroads is still relatively unimportant but the successful operation of trains in all parts of the country points to expansion.

Indications point to a total diesel output of 1,700,000 horsepower in 1936.

One reason for the disinclination of experts to set up any probable limit to the extension of the diesel's utility lies in the fact that European countries already have traveled far ahead of America in adoption of this prime mover. Colonel Lindbergh on his recent trip abroad expressed astonishment at the degree to which the diesel engine had been adapted to aircraft use in Germany. That country, he declared, leads the world in this respect.

The abundant supply of gasoline and its low cost in the United States, along with the relatively low manufacturing cost of the gasoline engine and its excellent performance, have been conspicuous factors in this country's failure to keep abreast of Europe in diesel development.

The characteristic which primarily distinguishes the diesel from other types of internal-combustion engines is that its operation is accomplished by compression of a charge of air in a cylinder to such a high temperature that it ignites the fuel oil sprayed into the cylinder by an air-compressor. This process calls for a heavier, more powerful machine than the gasoline engine and one made of stronger materials. The weight of the diesel engine, necessitated by the tremendous pressures imposed, has presented a major problem in some attempted applications. Nevertheless, the late L. M. Woolson perfected a diesel which, installed in an airplane, broke the nonrefueling endurance record in 1931. In that year also a diesel-powered racing car averaged 98 miles an hour on the Indianapolis, Ind., speedway without having to go to the pit for repairs. The Zephir's North Atlantic feat provides striking evidence that engineers have not rested in their endeavor to adapt the diesel to uses once regarded as impossible.

In his book on "Modern Diesel Engine Practice" Orville Adams asserts the diesel will not wholly supplant the gasoline engine because, among other reasons, such a substitution would upset the fuel price ratio and thus destroy a most attractive feature of the diesel, since fuel oil prices, under the law of supply and demand, would rise to new heights.

In the case of public utility buses, agricultural and industrial tractors and other uses a different situation exists. In some applications certain requirements in hill-climbing, speed and acceleration are more important than the peak horsepower of the engine, and the diesel is said to surpass the gasoline engine in these respects. Max Hofmann, diesel engineer, is authority for the statement that it should be possible to replace a 100-horsepower gasoline engine in a truck, bus, tractor or any heavy automotive vehicle with a diesel engine of about 80 to 85 horsepower without sacrificing anything in the way of acceleration, hill-climbing power or maximum speed on level highways. In Germany 540 diesel-equipped buses and trucks were already in operation in 1929, and the number has been growing steadily.

It is pointed out that it is economically profitable to use the diesel only where the length of service obtained from it yields a saving which offsets the higher first cost and the greater expense of maintenance. Any increase in the price of gasoline which widens the differential between it and fuel oil works to the advantage of the diesel. The greater cost of diesel maintenance lies in large measure in the shorter life of the cylinder-sleeves, pistons and piston-rings and in the more severe wear on crankshaft and bearings. Engineers are working assiduously to remove so far as possible such handicaps as now confront the diesel in efforts to attain broader utilization.

A question which has arisen in the petroleum industry in connection with the diesel's remarkable progress is whether it will be able to supply enough of the type of fuel needed by this engine. The answer seems to be in the fact that gas oils and fuels now cracked to produce gasoline will be available for diesel fuel as and if the demand for gasoline subsides.

For the illustrations accompanying this article The Oil and Gas Journal is indebted to the Santa Fe Railway Co., Standard Oil Co. of New Jersey, International Harvester Co., Diesel Power, Cummins Engine Co., Hercules Motor Co., Motorship and Boating and Fairbanks, Morse & Co.

A. P. Allison, district geologist, Sun Oil Company, Houston, Tex., has returned from a two-weeks' holiday at his former home in Nebraska.

Fred C. Sealey, manager of the production department, South Texas division, the Texas Company, Houston, Tex., is in Denver, Colo., on a vacation trip.

J. Ben Carsey has been placed in charge of geological, land and scouting work in New Mexico for Humble Oil & Refining Company. He will be stationed at Midland, Tex.

PERSONAL

CHARLES B. McCLINTOCK, consulting geologist and petroleum engineer, has returned to his office in Oil City, Pa., after a 3-months business trip on which he covered repressuring and water-flooding operations in Oklahoma and Kansas, and engaged in geologic work in the vicinity of San Antonio, Tex. He also visited the East Texas and Rodessa fields. Two days before leaving on his southwestern trip Mr. McClintock returned from a trip to Cuba where he made a brief geologic survey of the island. Before opening his consulting office he was employed by Sloan and Zook Company at Bradford, Pa.

DWIGHT BECKER, scout for Amerada Petroleum Corporation, Houston, Tex., has returned from a short vacation trip.

J. L. SHAKELEY, vice president, Frick-Reid Supply Corporation, is combining a vacation and business trip in the East, visiting Pittsburgh, New York and other points in the eastern area.

FRANK A. HOWARD, vice president of the Standard Oil Development Company, of New York, has been absent from his office for several days due to illness and death of his mother, MRS. MARY HOWARD. Mrs. Howard died at the home of a daughter, MRS. EDNA ACKER of Washington, D. C. Mrs. Howard was 84.

P. H. KELLY, Humble Oil & Refining Company, Houston, Tex., has been transferred to Corpus Christi and promoted to the position of chief clerk and warehouseman, Southwest Texas division. E. A. GOLDSMITH, whom Mr. Kelly succeeds, has been transferred to the Houston office. E. E. MAGILL has been transferred and promoted to the Gulf Coast division office as assistant division chief clerk and warehouseman. J. C. FANT succeeds Mr. Magill.

J. N. GREGORY, consulting geologist, has opened offices in Midland, Tex.

C. H. LIEB, president of the Carter Oil Company, has returned to the Tulsa offices of the company after spending vacation with his family at points in New Mexico.

PAUL F. LEWIS, district manager, E. I. DuPont DeNemours & Co., American Glycerine Company division, Tulsa, is on a 10-day combined business and vacation trip in the East.

CHARLES H. LANE, independent operator who has been spending most of his time in the Southwest Texas district, has returned to Houston, Tex., and has opened offices in the Second National Bank Building.

H. H. WRIGHT, of the Gulf Oil Corporation's Gypsy division, Tulsa, has been appointed chairman of the Mid-Continent district Subcommittee on Standardization of Oil Country Tubular Goods. He succeeds C. D. WATSON, resigned.

BRYON MEREDITH, division superintendent, Sinclair Prairie Oil Company, Troup, Tex., under whose supervision the Gulf Coast district has just been placed, has been spending much of his time in Houston, Tex., the past few weeks.

C. H. WILSON, chief clerk and warehouseman, Hurdle, Tex., district, Humble Oil & Refining Company, has been transferred to Judkins, Tex., in the same capacity.

DAN L. PERKINS, of Shreveport, La., consulting geologist and oil man, co-discoverer of the Rodessa oil field, is steadily improving since he was seriously wounded by a negro assailant August 10.

P. H. HOWARD, Tulsa attorney, has joined the legal staff of the Shell Petroleum Corporation in Tulsa. Mr. Howard has practised law in Tulsa for 12 years. He was two years with the Skelly Oil Company.

ROBERT J. SHORT, El Dorado, Ark., has been appointed a member of the Arkansas State Board of Conservation by GOV. J. M. FUTRELL, succeeding M. E. WILSON who recently moved from the state.

FRANK RAND, chief scout for the McClanahan Oil Company, of Mount Pleasant, Mich., and his bride, who was PERMELIA M. GIBSON, were expected to return this week from their wedding trip in Canada and the East.

BAXTER SANDERS has been transferred from the Oklahoma-Kansas division of the Shell Pipe Line Company to the Texas division where he has been made assistant pipe line superintendent with headquarters at Austin, Tex. His headquarters have been at Cushing, Okla.

ED KOPP, formerly representative for the Drane Tank Company at Midland, Tex., has been moved to the Fort Worth, Tex., office and JOHN E. DRANE has been transferred to Midland to represent the company in West Texas, R. R. WEIDMAN having been placed at Corpus Christi, Tex., by the company.

Do You Remember?

From The Oil and Gas Journal Files

25 YEARS AGO

Oklahoma and Kansas crude oil price is advanced 2 cents, making the price 50 cents per barrel, highest in over three years. Pennsylvania grade oil is $1.30 per barrel.

John Eaton, 71, president of the Oil Well Supply Co., dies at Atlantic City, N. J., on September 16th. He went to the Pennsylvania oil region in 1861 as a valve and fittings salesman.

20 YEARS AGO

William Fitzgibbon, 71, of Carnegie, Pa., widely known contractor and oil operator, dies on September 12 at his home.

Deposits in the Exchange National Bank of Tulsa have increased from $1,148,966 in September, 1911, to $13,600,-539, in September, 1916.

Bryant Beard, Garber, Okla., farmer, when he heard that oil had been discovered on a farm 3 miles distant, became mentally unbalanced and shot himself fatally.

10 YEARS AGO

W. W. Splane, former National Transit Co. official and later prominent as an oil and gas producer and gas company official, dies in Pittsburgh, Pa., September 18.

T. J. Thompson, general manager of the sales division and a director of Standard Oil Co. of Indiana, retires after 44 years of service with the Standard organization. He was succeeded by Amos Ball. Mr. Thompson started as a tank-wagon driver.

Thomas H. Wheeler, 82, retired, purchasing agent for the Standard Oil of New Jersey and general manager of all its cooperage plants, dies at Alexandria Bay, N. Y. He was with the Standard from 1873 until his retirement in 1913.

E. C. KINCADE, vice president Gulf Refining Co., pipe line division, Houston, Tex., district, is spending his vacation in Michigan.

G. I. McBRIDE, chief engineer for the Texas Company, Shreveport, La., has been attending to business matters in Baton Rouge, La., during the last week.

T. SHIEK of Wainwright, Alberta, is in Wainwright hospital recovering from injuries received while drilling. A falling derrick broke his right arm and right leg and caused other serious bodily injuries.

L. V. MANRY, of the land department of Humble Oil & Refining Company, Houston, Tex., has been appointed division land man of Southwest Texas with headquarters at Corpus Christi. He succeeds J. V. ADAMS, resigned.

JOSIAH TAYLOR has recently resigned from the Seismograph Survey Corporation, after extensive service in the Gulf Coast and Arkansas-Louisiana-Texas areas, to open a private office as consulting geophysicist in Shreveport, La., specializing in interpretative work.

E. B. LYMAN, assistant public relations director for Standard Oil Company of New Jersey, departed from Newark, N. J., airport September 4 for a trip to New Orleans, La.; Houston, Tex.; and Tampico, Mexico. Mr. Lyman will be away from his New York desk for about three weeks.

HARRY SNYDER, chairman of the board of Champlain Oils, Ltd., of Montreal, Quebec, accompanied by MRS. SNYDER, has returned by airplane from Dawson City to Edmonton, flying over the Liard and Peace River valleys. He expects to make a hunting trip next month to Gaspe Peninsula.

PARAGRAPHS

E. C. DILGARDE, Rocky Mountain representative of the Globe Oil Tools Company, Inc., of California, will make his headquarters in Denver, Colo. The company is opening a shop at Laramie, Wyo., and will handle a full line of bits, core-barrels and other oil field equipment.

FRED C. FOY, for the last four years advertising manager of the Shell Oil Company, at San Francisco, has been appointed to the same position with the Shell Eastern Petroleum Products, Inc., and will transfer to New York this month. Mr Foy succeeds J. L. COBB, JR., in Shell's New York office. Mr. Cobbs goes to San Francisco to replace Mr. Foy.

R. S. WINTER, district superintendent of the Canadian Western Natural Gas, Light, Heat & Power Company at Lethbridge, Alberta, since 1917, retired on pension on September 1, when he left for British Columbia where he will make his home near Nanaimo. Mr. Winter learned the gas business in the Medicine Hat fields, where he became municipal gas inspector and later joined the gas department of the Canadian Pacific Railroad. On the eve of his departure, the Canadian Western company tendered him a banquet with P. D. MELLON, general manager, as toastmaster. On behalf of the company officers and staff A. G. BAALIM presented Mr. Winter with a set of fishing rods and reels.

L. S. WESCOAT, vice president and secretary of the Pure Oil Company, has been elected a director of the corporation.

RAY McGREW, vice president of Standard Oil Company of Louisiana, is on a vacation in Maine and other eastern points.

C. C. REED, in charge of a party of geologists from Denver, Colo., is working in southern Alberta with the Heiland Research Corporation.

GURNEY PEOPLES, division manager of Black, Sivalls & Bryson, Inc., Fort Worth, Tex., is on a hunting trip in the Jackson Hole district in Wyoming.

ROBERT F. SCIVALLY, formerly representative for the Tretolite Company in the Hobbs, N. Mex., district, has been transferred to Wichita Falls, Tex., by the company.

W. H. BELL, chairman of Rodessa Engineering Committee, Shreveport, La., attended the conservation conference held in GOV. RICHARD W. LECHE'S office at Baton Rogue, La., on September 14.

SIR EDWARD BEATTY, president of the Canadian Pacific Railway, and HON. C. C. ROSS, minister of lands and mines for Alberta, recently inspected the operation of the separation plant of Abasand Oils, Ltd., near McMurray, Alberta.

W. S. KNUDSEN, executive vice president in charge of all car, body and accessory divisions in the United States and Canada; RICHARD H. GRANT, vice president in charge of sales, and LAURENCE F. FISHER, vice president in charge of style development, all with General Motors, are attending the Central Centennial at Dallas, Tex., and the Frontier Centennial at Fort Worth, Tex.

R. OGARRIO, vice president in charge of production for the Texas Corporation, and R. F. BAKER, vice president of the Colombia Petroleum Company, a subsidiary of the Texas Corporation, and Socony-Vacuum operating the Bacro concession, were aboard the Grace Line's Santa Rosa when it sailed from New York September 12 bound for Colombia, Peru, Panama and other South American ports.

C. H. M. BURNHAM has joined the J. G. White Engineering Corporation, and is assigned to work for the Coast Exploration Company, Federal Reserve Bank building, San Francisco, Calif. Before joining the White organization, Mr. Burnham served 11 years with the Cities Service Company, engaged in various phases of the natural gas industry in the Mid-Continent and Rocky Mountain districts. For the past three years he has been living in New York. Prior to affiliation with Cities Service, Mr. Burnham was engaged for several years as construction engineer for the Ohio Fuel Oil Gas Company, now a part of the Columbia Gas & Electric Company system.

DEAN FRANK C. WHITMORE, of Pennsylvania State College, known throughout the petroleum industry for his contributions to the chemistry of oil attended the meetings of the American Chemical Society at Pittsburgh, Pa., this week. Dean Whitmore has served as a director of the society and has been identified with its activities for many years. A paper carrying the title "Polymerization of Olefins" of which Dean Whitmore was co-author was read before the society's division of organic chemistry.

DR. REYNALDO DEAMBROSIS, chief chemist for Administracion Nacional De Combustibles, Alcohol, Y Portland. (Ancap) Montevideo, Uruguay, is spending six months in the United States for the purpose of visiting the refineries of the Mid-Continent, Pennsylvania, and the East Coast.

Oil Held Better Future

George B. Corless, superintendent of the Gulf Coast division of the Humble Oil and Refining Company, was active in the zinc and lead mining industry up to 1926, when, deciding oil held a better future for him, he entered the service of the Texas Company as a draftsman in its refinery engineering department in Houston, Tex. After a few months he joined the Humble Pipe Line Company as a levelman during the laying of the Ingleside-McCamey line in Texas. In 1927 he was made a civil engineer in the Amarillo division of the Humble Oil and Refining Company. The next year he was made petroleum engineer in the company's Gulf Coast division. Three years later he was elevated to his present position.

GEORGE B. CORLESS

Mr. Corless, born in Silverwood, Mich., received bachelor and master degrees from the University of Michigan. While a student there he served as weather observer and taught mineralogy. Work as a geologist and drill sampler in the Michigan and Wisconsin iron ranges followed. In 1914 Mr. Corless became resident geologist in Joplin for the Missouri Geological Survey. Three years later he was geologist in charge of exploration for the Chanute Spelter Company, and in 1920 he was made assistant manager. Leaving that organization in 1924, Mr. Corless became a consulting engineer and geologist, making reports on zinc and lead mines. While thus employed he yielded to the call of petroleum. He resides in Houston.

B. L. THOMPSON, with the Magnolia Refining Company of Fort Worth, Tex., has just returned from a fishing trip on the Gulf Coast.

T. N. ST. HILL, vice president of Petroleum Rectifying Company of California, is on a business trip which will include Gulf Coast, Mid-Continent and eastern oil fields.

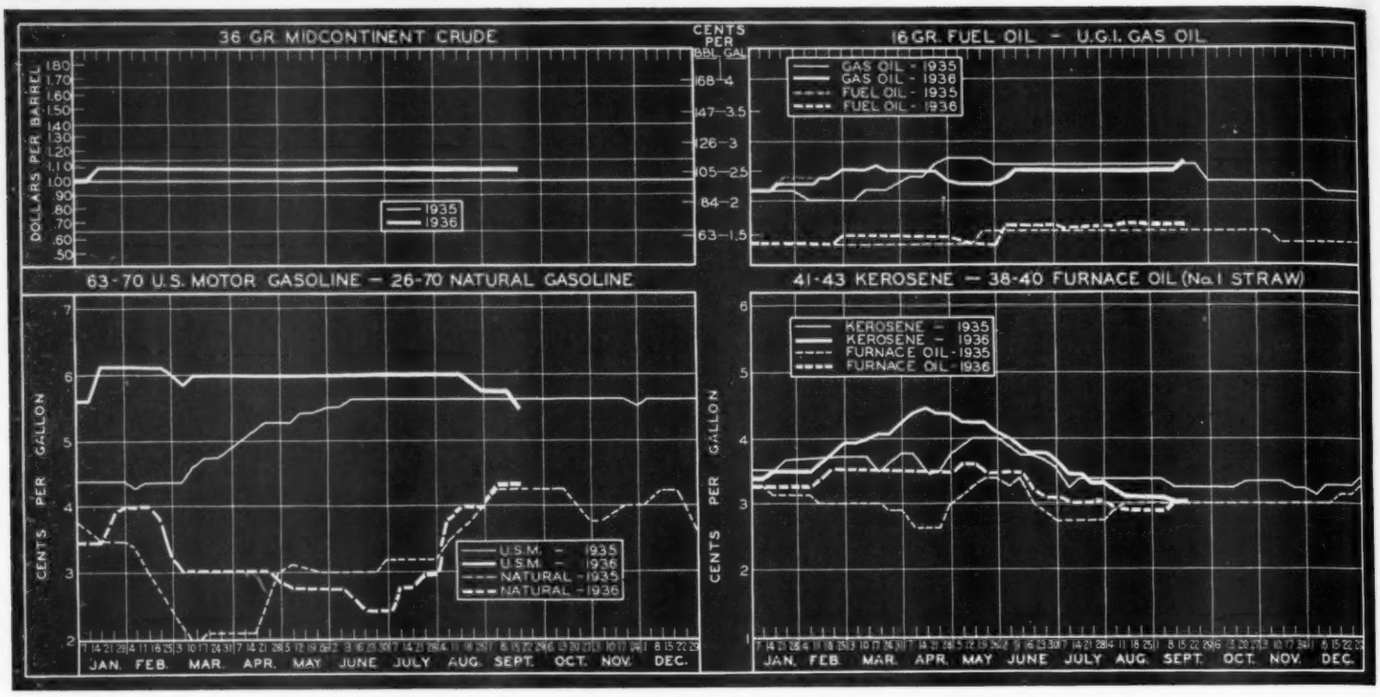
M. B. TUCKER has returned to the production headquarters of Shell Petroleum Corporation at Tulsa as evaluation engineer after two years in the St. Louis general headquarters.

H. C. VICTORY, district land man at New Orleans, La., for Humble Oil & Refining Company, has been transferred to the Houston, Tex. office. He will be succeeded by C. E. COOK.

JEFF DYE, formerly active with drilling contractors on the Pacific Coast, has moved to Shreveport, La., as manager of the newly formed South Central Drilling Company serving the Arkansas-Louisiana-Texas territory.

HOWARD E. EAGLESTON, formerly Pacific district manager, has been appointed general sales manager of General Cable Corporation, with headquarters at 420 Lexington Avenue, New York City. The appointment was effective September 1.

R. B. ROARK, Mid-Continent production manager for the Shell Petroleum Corporation, has been appointed a member of the research advisory group which is conducting research activities on secondary recovery methods at the Pennsylvania State College. These experiments, which are conducted under the auspices of the Bradford District Pennsylvania Oil Producers Association, were begun in 1933 with the object of securing a greater ultimate recovery of oil from the Bradford sands.


36 GR. MIDCONTINENT CRUDE
DOLLARS PER BARREL
1935
1936
CENTS PER BBL. GAL.
16 GR. FUEL OIL - U.G.I. GAS OIL
GAS OIL - 1935
GAS OIL - 1936
FUEL OIL - 1935
FUEL OIL - 1936
63-70 U.S. MOTOR GASOLINE — 26-70 NATURAL GASOLINE
CENTS PER GALLON
U.S.M. - 1935
U.S.M. - 1936
NATURAL - 1935
NATURAL - 1936
41-43 KEROSENE — 38-40 FURNACE OIL (No. 1 STRAW)
KEROSENE - 1935
KEROSENE - 1936
FURNACE OIL - 1935
FURNACE OIL - 1936
JAN. FEB. MAR. APR. MAY JUNE JULY AUG. SEPT. OCT. NOV. DEC.

Representative Mid-Continent Quotations on Crude Oil and Refined Products. Basis Oklahoma (Group 3)

Plant Shutdowns in Group 3 Forecast Unless Gasoline Prices Do Better

By T. F. SMILEY

Further softening of the tankcar and retail gasoline market in Group 3 territory drew from some refiners this week the declaration that they would shut down their plants rather than continue to sell at prevailing prices. The most commonly heard diagnosis of the market's weakness attributed it to too much gasoline, not only in the coastal areas, where stocks admittedly have been overlarge, but in the Mid-Continent, where, according to reports, many refinery tanks are disturbingly near to being full. This situation seems to have resulted from failure of some refiners to cut their runs sufficiently.

SOME REFINERS SOLD OUT

On the other hand there are refineries which literally are cleaned out and are obliged to buy from other plants to fill their own orders. But refiners who found themselves with big inventories on hand, with the heavy consuming season drawing to a close, became panicky. All were seized simultaneously with an urgent desire to lighten their stocks. Bargain sales were taken advantage of by thrifty buyers. Inevitably tankcar prices, which had been making a straight line across the graph since early March, began to wobble. The effect of drooping tankcar prices soon began to be observable in the retail market, so that in the last week or so there is rumored to have been undercover price cutting in tank-wagon sales and at the service station.

Some observers refuse to see anything alarming in the present market weakness, pointing out that after all there has been a huge decline in the country's total gasoline stocks and that there might easily be a prolongation of the tourist season, just as there was last year, when the midsummer gasoline prices continued unbroken 'till the middle of November, then quickly resumed their previous level and even bettered it. Actual consumption, it is noted, has surpassed that of last year, and with this fundamental fact in its favor it is believed the market might easily recover from its current indisposition. The same observers, however, express the opinion that gasoline stocks are still 15 to 20 per cent larger than they should be and that drastic cutting of runs is a prerequisite to restoration of market health.

Natural gasoline, which has been climbing upward since early last July, without even once glancing backward, stopped for a breathing spell, but gave no sign of exhaustion. It did not seem to be affected by the weakness in the refinery gasoline market, except that some in the trade declared if it were not for the backset in motor fuel the naturals would have gone higher.

The smashing consumption of gasoline this year, without regard to either the strength or weakness of the market, has imposed heavy demands upon the natural gasoline manufacturers. It is expected statistics, when they are available, will show 10 to 15 per cent more natural used in 1936 than in 1935. Manufacturers drew heavily on their storage in August, and at the present juncture it looks as though stocks would be pretty well used up by the end of September. Some in the trade say October 1 will find stocks at about the point ordinarily witnessed in the middle of November. So a continuation of the existing robust market is forecast.

BURNING OILS IN DEMAND

Burning oils are now in such demand and so closely held that the usual differentials between grades have disappeared in large measure. Prime white and No. 1 straw were probably the weakest members of the furnace oil group, but they too were in brisk demand. Gas oil was strong and hard to get. One jobber who had been trying for 10 days to pick up some U. G. I. material at 2½ cents said he had been unable to land it. Demand is understood to be coming chiefly from the manufactured gas industry. Movement of lubricants was described as satisfactory, and sales out of Group 3 territory are believed to have been about 20 per cent higher in the last two months than they were in the same period last year.

Refined Oil Market Barometer

Continued softening of the gasoline market observable in almost all areas except the West Coast, although signs of a turn were detected in some parts of the East. In the face of a weak gasoline market the naturals seem headed upward. The influence of agricultural demand begins to be felt in the kerosene and tractor fuels. Heating oils show marked tightening.

MID-CONTINENT. Gasoline weak. Naturals up. Furnace oils stronger.

EAST COAST. Retail gasoline markets slightly better, but still nervous.

GULF COAST. Kerosene firm. Gasoline off. Burning oils tight.

PENNSYLVANIA. Kerosene, fuel oil and wax up. Gasoline easy. Lubricants firm.

CALIFORNIA. Gasoline normal. Fuel oil firm. Natural gasoline tight.

CHICAGO. Tankcar gasoline off. Burning oils and tractor fuels stronger.

East Coast Gasoline Buyers Cautious as Touring Season Nears Close

By H. STANLEY NORMAN

NEW YORK, Sept. 15.—Doldrums of the off-season appeared to have settled on the Atlantic Coast oil markets in the last week. Prices were virtually unchanged in all products, although the tendency of scattered business was downward in one or two groups.

There appeared to be no sharp drop in gasoline consumption following Labor Day, but gasoline jobbers, dealers and service station managers are reluctant to buy ahead with the freedom previously prevailing.

Consumption was, in fact, reported holding strong at approximately normal levels prevailing before Labor Day, but nearness of the fall season has aroused cautious trading and a close check on stocks where more or less liberal buying existed previously.

The Labor Day consumption was reported satisfactory from all quarters. Record-breaking traffic prevailed on most of the main highways throughout the East.

However, the fear that business is due for a lull with the first cool weather has made previous liberal buyers shy of the market and their stocks are permitted to drift into lowest possible operating quantities.

On the other hand, the moderate weather prevailing up through the past week-end has delayed any material new business in furnace and burning oils. Most domestic and industrial tanks are filled as a result of deliveries spread over the summer months against new contract commitments and the bulk-station operators are not in position to order more material from refineries. The turnover of fuel oil stocks from refineries to bulk stations, jobbers and eventually into tanks of ultimate consumers will not start until cold weather has exhausted the present stand-by fuel supply.

The break in kerosene prices which developed the first week in September gave little evidence of spreading and there was even talk in the trade of early restoration. The prices at Atlantic seaboard refineries was generally posted at 4.625 cents per gallon in tankcar lots, but a few of the small dealers were reported handling some material for 4¼ to 4½ cents a gallon. There seems to be little distress material and most refiners report their stocks in good shape. Position to take immediate advantage of any improvement in the kerosene market seems well established by a large majority of refiners.

Retail gasoline markets in the East continue disturbed, but probably not to the extent that existed two weeks ago. Those in position to observe a broad range of service-station operations in the eastern territory report that fewer bargain signs of 6 gallons for 98 cents and $1 are apparent now than just prior to Labor Day.

Observers feel that gradual improvement in service-station prices may be due to a contraction of gallonage requiring the individual managers to realize more on each gallon of gasoline handled through pumps. Others feel that the policy of some station managers in seeking gallonage at sacrifice of margin was basically unsound and that the service men were prompt to detect errors in the system. However, men watching developments say several more weeks, and possibly months, will be required to eliminate the tendency to sacrifice margins for gallonage, a natural and expected result of converting company-operated stations to private management.

The export gasoline market received another setback last week due to failure of Argentina interests to follow through on inquiries for two tankers of motor fuel. The inquiries were placed with domestic companies and bids were submitted for the cargoes. Those making the inquiry have excused themselves from entering contracts immediately and the companies submitting bids have just about despaired of doing any business in that quarter. The inquiries for two cargoes of 68-octane gasoline coming into the market in the last week of August caused interest, but those bidding have completely discounted the possibilities of closing a trade.

There is virtually no open export business either in Atlantic waters or along the Gulf Coast so far as gasoline is concerned. The shipments to regular customers continue at satisfactory rates, but absence of open inquiries has caused some in the export trade to label this the dullest summer for many seasons.

Buying of bright stocks and neutral oils continues at unchanged prices. Much of the material bought is going into export channels and this line of business has been satisfactory. The demand for neutrals is expected to expand for the next few months and most reports are that refiners' stocks are in such shape that improved consumption will be reflected in better prices.

Coastwise movement of fuel oil is expanding materially as refiners with plants on the Gulf Coast start shipping their accumulated supplies to northern terminals, where it will be available for winter business in the open market and for prompt delivery. The increase in coastwise traffic is conclusively demonstrated by the advance in chartering rates. Tanker operators are now obtaining 20 cents per barrel for fuel-oil and heating-oil cargoes from the Gulf Coast to Atlantic ports, approximately 2 cents per barrel over the rate prevailing in August. Dirty tonnage is also in demand and the August prices of 14 to 16 cents per barrel have been advanced 2 and 3 cents by many lines.

Actual test of the fuel-oil market probably will not be possible until the middle or last of October, but large companies with big stocks are generally staying out of the present market. Competition for business is keen in the fuel list, but domestic consumers entering contracts are said to be doing most of their business with concerns in position to fulfill their obligations. Consequently, the fuel oils currently selling at prices off more than a quarter of a cent from general postings fall in the class of distress material and represent bargains for quick turnover which may not be repeated in the future.

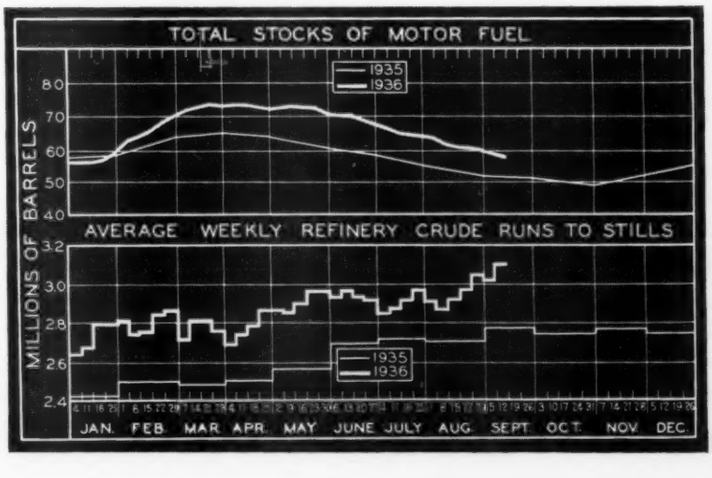
The belief is abroad in the eastern territory that refiners are faced with the problem of restricting the rate of charges to stills in the near future. Belief is general that the present rate of refining will cause an abrupt reversal in the trend of gasoline stocks with the first cold weather. Some of the leaders in the industry take the position that now is the time to gauge refining and production operations to a slower pace rather than to run at full speed into the winter season.

A. P. I. Weekly Refinery Statistics

Week Ending September 12, 1936

	Capacity reporting (per cent)	Daily crude runs (bbls.)	Total gasoline stocks	Gas oil and fuel oil stocks
East Coast	100.0	542,000	16,127,000	12,638,000
Appalachian	94.8	99,000	2,207,000	652,000
Indiana, Illinois, Kentucky	96.1	423,000	8,303,000	6,290,000
Oklahoma, Kansas, Missouri	84.8	295,000	5,660,000	3,526,000
Inland Texas	48.5	112,000	1,354,000	1,719,000
Texas Gulf	97.0	688,000	6,631,000	9,068,000
Louisiana Gulf	96.4	117,000	1,566,000	2,429,000
North Louisiana and Arkansas	90.0	41,000	253,000	380,000
Rocky Mountains	61.9	49,000	845,000	829,000
California	92.6	513,000	11,894,000	73,268,000
Total reported	89.8	2,879,000	54,840,000	110,799,000
Estimated unreported	.....	216,000	3,078,000	2,310,000
*Estimated total	.....	3,095,000	57,819,000	113,109,000
*Estimated total previous week	.....	3,025,000	58,493,000	†112,176,000
§September 30, 1935	.....	2,778,000	51,334,000	110,141,000

*Bureau of Mines basis, currently estimated. †Revised. §Monthly report of U. S. Bureau of Mines.



Dr. Winthrop P. Haynes, formerly chief geologist for Standard Oil Co. of New Jersey in Europe, has been transferred to the company's New York office where he will be consultant on European affairs. K. D. White, previously assigned to geological work in South America, has been moved to headquarters in London, England, to carry on duties formerly handled by Doctor Haynes.

A. W. Hunter, of the Maxmont Syndicate, Vancouver, British Columbia, recently visited Calgary, Alberta, and inspected drilling operations on Mar Jon-Maxmont No. 4 test on the Watson structure.

RETAIL OIL MARKETS

Tank-wagon and filling station prices on gasoline and kerosene furnished by the larger marketing firms

Prices as of September 15, 1936

Taxes

The gasoline quotations given in the following tables include the 1-cent federal tax, as well as state, county and city taxes. The gasoline is the regular or standard grade. In most areas a third grade and a premium grade are also available.

Discounts

Under the standard form of commercial consumer contract which went into effect March 1, 1934, save in California, Oregon, Washington, Arizona and Nevada, a discount of 1 cent a gallon off tank-wagon or 3 cents a gallon off retail prices is permitted for purchases between 4,000 and 10,000 gallons per month or 4 cents a gallon off retail prices for purchases in lots of more than 10,000 gallons a month. The minimum delivery is 25 gallons.

Standard Oil Co. (Indiana)

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank-wag.
Chicago	15.5	17.5	4.0	9.2
Decatur, Ill.	15.7	17.7	4.0	9.2
E. St. Louis	15.4	17.4	4.0	8.9
Joliet	14.5	17.5	4.0	9.2
Peoria	15.7	17.7	4.0	9.2
Quincy	15.5	17.5	4.0	9.0
Davenport, Ia.	16.7	(†)	4.0	9.2
Des Moines	15.5	(†)	4.0	9.0
Mason City	16.9	(†)	4.0	9.4
Sioux City	15.7	(†)	4.0	9.2
Duluth, Minn.	16.5	(†)	4.0	10.0
Mankato	16.1	(†)	4.0	9.6
Minneapolis	16.1	(†)	4.0	9.6
La Crosse, Wis.	17.1	(†)	5.0	9.6
Green Bay	17.4	(†)	5.0	9.9
Milwaukee	16.2	(†)	5.0	9.5
Madison	17.1	(†)	5.0	9.6
Detroit, Mich.	15.0	(†)	4.0	8.8
Grand Rapids	15.4	(†)	4.0	9.3
Saginaw	15.6	(†)	4.0	10.1
Evansville, Ind.	17.4	(†)	5.0	9.7
Indianapolis	17.6	(†)	5.0	9.0
South Bend	17.8	(†)	5.0	9.0
Fargo, N. Dak.	17.1	19.1	4.0	10.6
Huron, S. Dak.	17.6	(†)	5.0	10.1
Sioux Falls	17.1	(†)	5.0	9.6
Kans. City, Mo.*	15.1	17.1	4.0	8.0
Springfield	14.8	(†)	4.0	8.3
St. Louis	15.4	(†)	4.0	8.9
St. Joseph*	15.1	(†)	4.0	8.6
Wichita, Kans.	14.6	(†)	4.0	8.0
Bartlesville, Ok.	15.0	19.0	5.0	8.5

*State tax 2 cents, 1-cent city tax and 1-cent federal tax.

†Standard Oil Co. (Indiana) has leased all service stations in these cities.

Discounts to dealers except in Iowa 3½ cents on premium and regular and 2½ cents on third grade off service station prices; discounts to dealers in metropolitan Chicago one-half cent larger than rest of Standard of Indiana territory, namely 4 cents and 3 cents on respective grades. Dealers in Iowa sold at posted "Dealer Prices."

Stanolex Fuel Oil in Chicago

Effective August 1, 1936, f.o.b. Chicago tank-wagon prices: Range oil, less than 100 gallons, 8.75 cents; 100-119 gallons, 7.75 cents; 150 gallons and more, 7.25 cents. No. 1, less than 150 gallons, 7.5 cents; 150 gallons or more, 6.5 cents. Stanolex furnace oil, less than 150 gallons, 7.5 cents; 150 gallons or more, 6.5 cents. Stanolex fuel "A," less than 400 gallons, 5.75 cents; 400 gallons or more, 4.75 cents. Stanolex fuel "B," 5.25 cents per gallon gross; 800 gallons or more 4.25 cents.

Southern District

STANDARD OIL CO. OF KENTUCKY

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank-wag.
Atlanta, Ga.	20.5	22.5	7.0	*13.0
Augusta	20.0	22.0	7.0	*13.5
Macon	20.0	22.0	7.0	*14.0
Savannah	18.5	20.5	7.0	*12.5
Birm'ham, Ala.	21.0	23.0	8.0	12.0
Mobile	21.0	23.0	9.0	11.0
Montgomery	23.0	24.0	9.0	14.0
Jackson, Miss.	20.0	22.0	7.0	*13.0
Vicksburg	19.5	....	7.0	12.5
Jacksonville, Fla.	18.0	20.0	8.0	11.5
Miami	19.5	21.5	8.0	12.5
Pensacola	21.5	23.5	9.0	12.0
Tampa	18.0	20.0	8.0	11.5
Lexington, Ky.	19.0	21.0	6.0	11.0
Covington	18.5	20.5	6.0	10.5
Louisville	19.0	21.0	6.0	10.0
Paducah	18.0	19.0	6.0	8.5

*Includes 1 cent state tax. Montgomery, Ala., has a county tax of 1 cent per gallon, and a city tax of 1 cent per gallon on gasoline, in addition to state tax; and 1 cent per gallon on kerosene. Mobile, Ala., has a city gasoline tax of 2 cents per gallon; Birmingham, Ala., has a city gasoline tax of 1 cent per gallon. Pensacola, Fla., has a city gasoline tax of 1 cent.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank-wag.
Denver, Colo.	19.0	21.0	5.0	11.0
Grand Junction	21.5	23.5	5.0	15.0
Pueblo	19.0	21.0	5.0	10.0
Casper, Wyo.	19.5	21.5	5.0	11.5
Cheyenne	19.5	21.5	5.0	13.0
Butte, Mont.	21.0	23.0	6.0	14.5
Billings	22.5	24.5	6.0	14.5
Helena	22.5	24.5	6.0	14.5
Great Falls	22.5	24.5	6.0	14.5
Salt Lake, Utah	21.0	23.0	5.0	16.0
Twin Falls, Ida.	23.0	25.0	6.0	18.0
Boise	22.5	24.5	6.0	18.0
Albu'que, N. M.	19.0	21.0	*6.5	13.0

*Includes one-half cent city tax.

Discount to dealers with or without contract in Continental territory: Undivided dealer discount off service station price 4 cents except in Montana where a discount of 2 cents off tank-wagon price only is allowed; divided dealer accounts, 3½ cents.

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA*

	Gasoline			Kero.
	Tank wag.†	Serv. sta.	Inc. tax	tank-wag.
San Francisco	17.0	18.0	4.0	11.5
Los Angeles	16.5	17.5	4.0	9.0
Fresno, Calif.	17.5	18.5	4.0	11.0
Phoenix, Ariz.	21.0	22.0	6.0	‡16.0
Reno, Nev.	19.5	20.5	5.0	13.0
Portland, Ore.	19.5	20.5	6.0	13.5
Seattle, Wash.	19.5	20.5	6.0	13.5
Tacoma	19.5	20.5	6.0	13.5
Spokane	22.5	23.5	6.0	16.5

*Retail prices posted by Standard Stations, Inc., a subsidiary.

†Prices are at company's plant or depots, as company does not operate stations. A 4-cent per gallon discount is given dealers and customers taking tank-wagon lots except in Phoenix where discount is 1 cent.

‡Includes 5-cent state tax.

Atlantic Coast District

STANDARD OIL CO. OF NEW JERSEY

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank-wag.
Atl'tic City, N.J.	13.5	....	4.0	9.0
Newark	13.0	....	4.0	7.5
Annapolis, Md.	15.1	....	5.0	10.0
Baltimore	14.5	....	5.0	8.0
Cumberland	16.6	....	5.0	12.7
Wash'g'n, D. C.	12.5	16.0	3.0	9.0
Danville, Va.	17.2	20.7	6.0	12.9
Norfolk	16.0	19.5	6.0	11.3
Petersburg	16.3	19.8	6.0	11.7
Richmond	16.3	19.8	6.0	11.7
Roanoke	17.5	21.0	6.0	12.9
Charles'n, W. Va.	15.8	19.3	5.0	12.6
Parkersburg	15.1	....	5.0	11.2
Wheeling	16.0	18.5	5.0	12.2
Charlotte, N. C.	18.4	21.9	7.0	12.6
Hickory	18.9	22.4	7.0	13.0
Mt. Airy	18.7	....	7.0	12.8
Raleigh	18.0	....	7.0	12.1
Salisbury	18.5	....	7.0	12.7
Charleston, S. C.	17.0	20.5	7.0	11.1
Columbia	18.0	21.5	7.0	12.1
Spartanburg	18.7	22.2	7.0	12.9

Tank-wagon gasoline refers to dealer instead of retail prices.

Price basis to dealers: Undivided dealers at regular price less one-half cent. Discount for kerosene, 1 cent off tank-wagon price for 25 gallons or more under contract (contract not necessary in Baltimore) except in New Jersey, where no discount (if necessary) is given.

Nebraska

STANDARD OIL CO. OF NEBRASKA

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank-wag.
Omaha	18.1	20.1	6.0	9.5
McCook	18.8	20.8	6.0	10.2
Norfolk	18.5	20.5	6.0	9.9
North Platte	18.9	20.9	6.0	10.3
Scotts Bluff	19.6	21.6	6.0	11.0

Note—Discounts to dealers: where service station gasoline prices are (maximum overall, including rent) as follows: Reliance, 2½ cents; Standard Red Crown, 3½ cents; Red Crown Ethyl, 3½ cents.

Where service station gasoline prices are below normal resellers' allowances are reduced one-half of the amount below normal, down to the following (minimum overall, including rent): Reliance, 2 cents; Standard Red Crown, 3 cents; Red Crown Ethyl, 3 cents. Discounts to consumers for tank-wagon deliveries covered only by standard commercial consumers contract effective January 1, 1935.

Pennsylvania, Delaware and Part of New England

ATLANTIC REFINING CO.

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank-wag.
Philadelphia, Pa.	16.5	17.5	5.0	9.5
Pittsburgh	17.5	19.5	5.0	9.0
Allentown	17.0	18.0	5.0	9.5
Erie	17.5	18.5	5.0	8.0
Scranton	16.75	17.0	5.0	10.0
Altoona	17.5	19.5	5.0	9.5
Dover, Del.	17.0	17.0	5.0	10.0
Wilmington	17.0	17.0	5.0	9.0
Springf'ld, Mass.	13.0	16.5	4.0	7.5
Worcester	14.0	17.5	4.0	7.75
Hartford, Conn.	13.0	16.5	4.0	7.0
New Haven	13.0	16.5	4.0	7.5
Providence, R. I.	12.0	15.5	3.0	7.0

Note—Tank-wagon prices are those applicable to consumers purchasing lots of 100 or more gallons in one delivery.

Central South District

STANDARD OIL CO. OF LOUISIANA

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank-wag.
N. Orleans, La.	19.5	23.0	*10.0	†13.0
Baton Rouge	18.0	21.5	8.0	11.5
Alexandria	18.5	....	8.0	11.0
Lafayette	19.0	....	8.0	13.5
Lake Charles	19.0	....	8.0	11.0
Shreveport	17.5	21.0	8.0	10.0
Knoxville, Tenn.	20.5	24.0	8.0	14.0
Memphis	19.0	22.5	8.0	11.0
Chattanooga	20.5	24.0	8.0	11.5
Nashville	20.0	23.5	8.0	10.0
Bristol	19.25	....	8.0	14.5

*Includes 2-cent parish tax. †Includes 1 cent parish tax and 1 cent state tax.

Tank-wagon gasoline refers to dealer instead of retail prices.

Price basis to dealers: Undivided dealers at dealer price less one-half cent.

Louisiana kerosene prices include 1-cent state tax.

New York and New England

SOCONY-VACUUM OIL CO., INC.

	Gasoline			Kero.
	Post. deal.	Serv. sta.	Inc tax	tank-wag.
Albany, N. Y.	13.0	....	4.0	7.75
*Met. N. Y.:				
Manhtn., Bronx	12.7	....	4.0	7.25
Staten Island	13.0	....	4.0	7.25
Qu'ns & Br'klyn	12.7	....	4.0	7.25
Buffalo	13.5	....	4.0	8.25
Rochester	13.5	....	4.0	8.25
Syracuse	13.5	....	4.0	8.75
Boston, Mass.	13.0	....	4.0	7.50
Portland, Me.	15.0	....	5.0	7.75
Manch'ter, N. H.	15.5	....	5.0	8.00
Burlington, Vt.	16.5	....	5.0	8.75

*Does not include 2 per cent city sales tax which is calculated on basis of net retail price exclusive of state and federal taxes.

Southwestern District

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank-wag.
Dallas, Tex.	16.0	17.0	5.0	8.5
Fort Worth	16.0	17.0	5.0	8.5
Houston	16.0	18.0	5.0	8.5
San Antonio	16.0	18.0	5.0	8.5
El Paso	17.0	19.0	5.0	10.0
Muskogee, Ok.	17.0	19.0	5.0	8.0
Okla. City	17.0	19.0	5.0	8.0
Tulsa	17.0	19.0	5.0	8.0
Ft. Smith, Ark.	17.0	19.0	5.0	8.0
Little Rock	19.5	21.5	7.5	9.5
Texarkana	16.5	18.5	5.0	8.5

Naphtha

STANDARD OIL CO. (INDIANA)

	Tank-wagon*
Oleum spirits	15.7
V.M.&P. naphtha	16.0
Cleaners' naphtha	15.0
Stanisol	15.0

*Prices include 3-cent Illinois tax, but not 1-cent federal tax or 2 per cent retail occupational tax.

Prices f.o.b. Chicago. Each price subject to discount of 1 cent per gallon for 150 gallon lots if covered by contract.

Ohio

STANDARD OIL CO. OF OHIO

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank-wag.
Ohio points	17.5	19.5	5.0	*13.5

*Includes state tax of 1 cent.

Canada*

Imperial 3-Star Gasoline
IMPERIAL OIL, LTD.

	Gasoline			Kero.
	Tank wag.	Serv. sta.	Inc. tax	tank-wag.
Hamilton, Ont.	21.0	23.5	6.0	17.0
Toronto, Ont.	21.0	23.5	6.0	17.0
Brandon, Man.	29.8	32.8	7.0	23.1
Winnipeg, Man.	28.2	31.2	7.0	20.7
Regina, Sask.	29.5	32.5	7.0	22.0
Saskatoon, Sask.	32.3	35.3	7.0	24.8
Edmonton, Alta.	31.7	34.7	7.0	24.2
Calgary, Alta.	29.0	32.0	7.0	21.5
Vancouver, B. C.	25.0	28.0	7.0	23.0
Montreal, Que.	19.5	22.0	6.0	17.5
St. John, N. B.	25.0	29.0	8.0	19.5
Halifax, N. S.	25.0	29.0	8.0	19.5

*Imperial gallon used in Canada.

Discount to dealers: Divided dealers pay 3 cents per gallon below station price; undivided dealers pay 4 cents per gallon below station price except in cities of Hamilton, Toronto and Montreal where discounts below station price are one-half cent per gallon less and in Vancouver where discounts are 1 cent per gallon more.

Retail Price Changes

Standard Oil Co. (Indiana) September 10 advanced tank-wagon kerosene 1 cent in St. Louis.

Standard Oil Co. of New Jersey September 7 reduced tank-wagon kerosene .2 cent in Charleston, S. C.; September 7 reduced tank-wagon and station gasoline .3 cent and tank-wagon kerosene .5 cent in Columbia.

Standard Oil Co. of Louisiana September 1 advanced tank-wagon and station gasoline and tank-wagon kerosene 1 cent in New Orleans following an increase of 1 cent per gallon tax in Orleans Parish on all deliveries made within the boundaries of that parish.

23,854-Bbl. Well in Edmond

The east side of the Edmond pool in Oklahoma County, Oklahoma, yielded a big initial producer on Monday when Pure Oil Co. No. 10 Malm, NE SE SW section 30-14-3w, flowed 3,975 bbls. the first four hours, giving it a potential rating of 23,854 bbls. per day, producing from Wilcox sand at a total depth of 6,705 feet. It also produced gas at the rate of 34,000,000 feet per day. Ohio Oil Co. No. 12 Dahl-1, flowed 889 bbls. in 10 hours with gas at the rate of 13,000,000 feet per day, but was drilling deeper at 6,665 feet.

In the Fitts pool, Pontotoc County, Oklahoma, Carter Oil No. 18 Richards, SE SE SE section 30-2-7 flowed 823 bbls. of oil in three hours at a total depth of 4,418 feet. Amerada Petroleum Corp. No. 2 Wooley, SW SE SE section 30-2-7 acidized in Hunton lime, total depth 3,784 feet, flowed 823 bbls. of oil in two hours and 14 minutes.

In the Moore pool, Cleveland County, Oklahoma, Sinclair Prairie Oil Co. and others No. 1 Fant, in section 27-10-2w tested 887 bbls. of oil in two hours at a total depth of 7,294 feet, but was not yet a completion. Three new locations were made on the communitized block by Sinclair Prairie and its associates, and Anderson & Pritchard made a location in the SE SW section 16-10-2w. Same company's No. 1 State in SW SW SE section 16 flowed about 150 bbls. an hour at 7,256 feet, but will be shot in an effort to increase production.

PRICES OF REFINED PRODUCTS

All quotations f.o.b. plant in cars for interstate or export movement except as otherwise noted

Prices as of September 15, 1936

The following quotations are exclusive of the federal excise taxes of 1 cent a gallon on gasoline and 4 cents on lubricating oils.

Refinery Gasoline

OKLAHOMA (Group 3)—

U. S. Motor grades:		
62 octane and below (3d gr.)	.04½	.04¾
63-67 octane	.05	.05¼
68-70 octane (regular)	.05½	.05¾
60-62 400 grades:		
62 octane and below (3d gr.)	.04½	.04¾
63-67 octane	.05	.05¼
68-70 octane (regular)	.05½	.05¾
64-66 375	.04¾	.05
68-70 360	.05	.05½

NORTH TEXAS—

U. S. Motor grades:		
62 octane and below	.04¾	.04¾
63-67 octane	.05	.05¼
68-70 octane (regular)	.05¾	.05¾
60-62 400	.04¾	.04¾
64-66 375	.04¾	.05

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

U. S. Motor grades:		
62 octane and below	.05½	.05¾
63-67 octane	.06¼	.06½
68-70 octane (regular)	.06½	.06¾
60-62 400	.05¾	.06

ARKANSAS (Ark., N. La., Miss. del.)—

U. S. Motor grades:		
62 octane and below	.05½	.05¾
63-67 octane	.06¼	.06½
68-70 octane (regular)	.06½	.06¾

CHICAGO (Based on Group 3)—

U. S. Motor grades:		
62 octane and below	.04¾	.04¾
63-67 octane	.05½	.05¾
68-70 octane (regular)	.05¾	.06
60-62 400 grades:		
62 octane and below	.04¾	.04¾
63-67 octane	.05½	.05¾
68-70 octane (regular)	.05¾	.06
64-66 375	.04¾	.05
68-70 360	.05	.05½

PENNSYLVANIA (inland refineries)—

58-60 U. S. Motor:	
Below 60 octane	.05¾
60-64.9 octane	.07
65-70 octane	.07¼
64-66 375	.06
68-70 350	.06¼

CALIFORNIA (domestic movement)—

54-58 U. S. Motor	.07	.08
58-60 400	.07¾	.08½

EAST COAST (domestic)—

U. S. Motor below 60 octane:	
*New York (Bayonne)	.06½
Baltimore	.06½
U. S. Motor, 60-64.9 octane:	
*New York (Bayonne)	.06½
Philadelphia	.06½
Boston	.06½
Baltimore	.06½
Charleston, S. C.	.06½
U. S. Motor, 65 and above:	
*New York (Bayonne)	.06¾
Philadelphia	.06¾
Boston	.06¾
Baltimore	.06¾
Charleston, S. C.	.06¾

*All grades of gasoline one-eighth to one-fourth cent less for barge shipments. New York harbor prices are for New York and New England delivery. Prices for New Jersey delivery one-fourth cent lower.

GULF COAST (domestic)—

U. S. Motor grades:		
Below 60 octane	.05¾	.05¾
60-64.9 octane		.06
65 octane and higher	.06½	.06¼

Naphtha

PENNSYLVANIA (inland refineries)—

50-52 450 (blending)	.05½
52-54 450 (blending)	.05½
54-56 450 (blending)	.05¾

Natural Gasoline

OKLAHOMA (Group 3)—

Grade 26-70	.04¼	.04¾
Grade 18-55	.05	.05½
Low vapor pressure grade:		
*14-pound v.p. (max.)	.05¾	.05¾
*12-pound v.p. (max.)	.06	.06¼

*Nominal.

NORTH TEXAS—

Grade 26-70	.04½	.04¼
Grade 18-55	.04¾	.05

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

Grade 26-70	.04¾	.04¾

CALIFORNIA—

75-85 375-390	.07	.07¾

Tractor Fuel

OKLAHOMA (Group 3)—

40-42 gr., 315-325 i.b.p., 110 flash, 540-550 e.p.	.03¼	.03½
41-43 gr., 300-350 i.b.p., 110-125 flash, 500-520 e.p.	.03½	.04¼
46-48 gr., 210-230 i.b.p., 480 max., e.p.	.04¾	.05

Kerosene

(All kerosene water white)

OKLAHOMA (Group 3)—

41-43	.03	.03¼
42-44	.03¼	.03½

NORTH TEXAS—

41-43	.03¼	.03¼

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

41-43	.03¾	.03½

ARKANSAS (Ark., N. La., Miss. del.)—

41-43	.04	.04¾

PENNSYLVANIA (inland refineries)—

45	.04¾	.04¾
46	.04¾	.05
47	.05	.05½

CHICAGO (Based on Group 3)—

41-43	.03	.03¼
42-44	.03¼	.03½

CALIFORNIA (Pac. Coast market)—

38-40 high burning test	.03½	.05

NEW YORK (Bayonne, N. J.)—

41-43	.04¾

GULF COAST (domestic)—

41-43	.03¾

*Barge price one-eighth cent lower.

Furnace Oil

OKLAHOMA (Group 3)—

No. 1 prime white, 38-42	.03	.03½
No. 1 straw, 38-40	.03	.03½
No. 2 straw, 32-36	.02¾	.03¼
No. 2 dark, 32-36	.02¾	.03
No. 3, 28-32	.02¾	.03
No. 3, 15 and above, 28-32	.02½	.02¾

NORTH TEXAS—

No. 1 prime white, 38-42	.03	.03¼
No. 1 straw, 38-40	.02¾	.03¼

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

No. 2, 32-36	.02¾	.03

ARKANSAS (Ark., N. La., Miss. del.)—

No. 2, 32-36	.03	.03¼
No. 3, 28-32	.02¾	.03

CHICAGO (Based on Group 3)—

No. 1 prime white, 38-42	.03	.03¼
No. 1 straw, 38-40	.02¾	.03¼
No. 2 straw, 32-36	.02¾	.02¾
No. 2 dark, 32-36	.02¾	.02¾
No. 3 zero to 15, 28-32	.02¾	.02¾
No. 3, 15 and above, 28-32	.02¾	.02½

NEW YORK (Bayonne, N. J.)—

*No. 1		.04¾
*No. 2	.04	.04¼
*No. 4		.04

*Barge deliveries one-eighth to one-fourth cent under above, tankcar price.

Gas Oil and Fuel Oil

(Gas oil per gal., fuel oil per bbl.)

OKLAHOMA (Group 3)—

U.G.I. gas oil	.02¾	.02¾
No. 4, 24-28, low cold test	.95	1.05
No. 4, 15 and above, 24-28	.80	.85
No. 5, low cold test	.72½	.80
Below 18 fuel oil, industrial	.70	.75

NORTH TEXAS—

U.G.I. gas oil	.02¾	.02½
No. 4, 24-28, low cold test	.95	1.00
No. 5, low cold test	.77½	.80
Below 18 fuel oil, industrial	.65	.75

NORTH LOUISIANA (Ark., N. La. and Miss. delivery)—

U.G.I. gas oil	.02¾	.02¾
10-14 fuel oil, industrial	.70	.75

ARKANSAS (Ark., N. La., Miss. del.)—

10-14 fuel oil, industrial	.60	.65

CHICAGO (Based on Group 3)—

U.G.I. gas oil	.02¾	.02¾
No. 4, 24-28	.95	1.00
No. 4, 15 and above, 24-28	.77½	.82½
No. 5, 18-22	.72½	.75
No. 6, 10-16	.62½	.67½

PENNSYLVANIA (inland refineries)—

36-40	.04¼	.04¾

CALIFORNIA—

Los Angeles:		
30-34 gas oil, per bbl.	.95	1.15
24 plus diesel	1.00	1.25
24 plus diesel (bunkers)	1.05	1.30
12-16 (bunkers at tidewater)	.85	.95
10-16 (cargo lots)	.75	.95
12-17 (tankcars)	.70	.95
San Joaquin Valley:		
10-18 (tankcars)	.70	.75
San Francisco:		
24 plus diesel		1.35
24 plus diesel (bunkers)		1.35
10-16 (bunkers)		1.00

GULF COAST—

28-30 gas oil	.03¾	.03¾
28-30 diesel (bunkers)		1.50
Bunkers (bulk cargoes)		.85
Bunker C (bunkers)		.90

NEW YORK (Bayonne, N. J.)—

27 plus, gas oil		.04½
28-30 diesel (lighterage 6¼ per bbl.)		1.64
28-30 diesel (tankcars)	.04¼	.04½
*Bunker C (to ocean-going ships in N. Y. harbor)		1.10
Industrial fuel (tankcars)		.03¾

*Lighterage charge 5c bbl. additional.

Bright and Steam-Refined

OKLAHOMA (Group 3)—

Bright Stocks:	
190-200 D, 15-25	.21½
150-160 D, 0-10	.18½
150-160 D, 15-25	.18
150-160 E, 15-25	.17½
100-110 D, 0-10	.17
Steam refined:	
631 green (treated)	.14
600 dark green (untreated)	.05½

PENNSYLVANIA—

Bright Stocks (Pennsylvania grade No. 8 color, 145-50 at 510; 540-550 flash):	
10 pour test	.24½ .25
15 pour test	.23½ .24
20 pour test	.22½ .23
25 pour test	.21½ .22
Steam refined:	
600	.13½ .14
650	.14½ .15
600 Pennsylvania flash	.15½ .16
630 flash	.17½ .18
600 Warren E filtered	.15½ .16

Neutral Oil

(Vis. at 100° F. except Pennsylvania and color N.G.A.)

OKLAHOMA (Group 3)—

Zero to 10 Cold Test:	
150-3	.10
180-3	.11¼
190-4	.10¾
200-3	.11¾
200-4	.11¼
250-3	.13¾
250-4	.13¼
280-3	.14¾
280-4	.14¼
300-3½	.15¼
400-3½	.16
100-2 paraffin oil	.05¾
15-20 Cold Test:	
200-3	.10¾
200-4	.10¼
240-3	.12¾
240-4	.12¼
280-3	.13¾
280-4	.12¾

GULF COAST—

Pale Oils:		
200-3	.06½	.07
300-3	.07	.07½
500-3½	.08	.08½
750-3½	.08½	.09
1,200-3½	.09	.09¼
2,000-4	.09¼	.09½
Red Oils:		
200-5-6	.06½	.06¾
300-5-6	.06¾	.07
500-5-6	.07½	.08
750	.08	.08½
1,200-5-6	.08½	.09

CALIFORNIA (moving to dom. market)

Pale Oils:	
100-2½-3	.06
200-2½-3	.06¼
300-3-3½	.06½
400-3-4	.08½ .09¼
450-3-4	.09¾ .10
550-3-4	.10 .10¼
600-3-4	.10¼ .10½
Red Oils:	
200-4-5	.06
300-5-6	.06¼
350-5-6	.07 .08
400-5-6	.08 .08¼
450-5-6	.08¼ .08½
500-5-6	.08½ .09
600-5-6½	.09 .09½
700-6½ plus	.09¾ .10
750-6½ plus	.10 .10¼
900-6½ plus	.10¼ .10½

PENNSYLVANIA—

150 vis. at 750° F. color, 400-405 flash:	
Zero pour test	.19½ .20
10 pour test	.18½ .19
15 pour test	.18 .18½
25 pour test	.17 .17½
180 vis. at 70° F., 3 color:	
25 pour test	.19½ .20
200 vis. at 70° F., 3 color:	
Zero pour test	.23 .23½
10 pour test	.22 .22½
15 pour test	.21½ .22
25 pour test	.20½ .21

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—

124-126 (a.m.p.) w.c. scale	.02½

PENNSYLVANIA (inland refineries)—

122-124 (a.m.p.) w.c. scale	.0245	.0250
124-126 (a.m.p.) w.c. scale	.0250	.0255

NEW YORK—

Wax in bags fully refined:	
122-125 (a.m.p.) wax	.0445
125-127 (a.m.p.) wax	.0455
128-130 (a.m.p.) wax	.0480
130-132 (a.m.p.) wax	.0505
133-135 (a.m.p.) wax	.0535
135-137 (a.m.p.) wax	.0560
124-126 (a.m.p.) w.s.	.0240 .0250
124-126 (a.m.p.) y.s.	.0240 .0245
Petrolatum in barrels, carload lots:	
Dark green	.01⅞
Amber	.02⅞ .03
Extra amber	.03 .03½
Lily white	.06⅝ .06¾
Snow white	.07¾ .07⅞
Cream	.05¾ .05¾

Export Prices

GASOLINE

GULF COAST—

U. S. Motor		.05½
60-62 400		.05¾
61-63 390	.05¾	.05½
64-66 375		.05½

LOS ANGELES—

U. S. Motor grades:		
53-55 octane		.04¾
55-65 octane	.04¾	.05
65-67 octane		.05
67-69 octane		.05½
Above 69 octane		.05½
65 and above 400 e.p.	.05½	.06

KEROSENE

GULF COAST—

41-43 prime white		.03
41-43 water white		.03½
44 water white		.03¾

LOS ANGELES—

41-43 water white	.04½	.05

LUBRICANTS

(Pennsylvania Grade)

NEW YORK (f.a.s. in bbls.)—

Cylinder Stocks:		
600 Warren E		.21½
600 S.R. unfiltered	.19½	.20
650 S.R. unfiltered	.20¼	.20¾
600 flash S.R.	.21	.21½
630 flash S.R.	.24	.24½
Bright Stocks:		
8 color		.23
6½ plus color in dilution		.27

NEUTRAL OIL

200-3 color	.27
150-3 color	.23½

PARAFFIN WAX

NEW YORK (prices per pound)—

123-125 a.m.p.		.04125
125-127 a.m.p.		.0425
128-130 a.m.p.		.0450
133-135 a.m.p.		.0525
135-137 a.m.p.		.0550
Crude scale:		
124-126 w.s.	.0260	.0270
124-126 y.s.	.0245	.0250

CRUDE OIL PRICES

Oklahoma, Kansas, North Central and East Central Texas

(January 9, 1936)

East Texas*	$1.15
Van, Tex.†	1.02
Altus and Tipton, Okla.‡	1.08
Other fields (see gravity table).	

*All companies. †Pure Oil Co. ‡Gulf Oil Corp.

West Texas

Crane, Upton, Howard, Glasscock and Mitchell Counties	$ .80
Winkler County	.85
Lea County, N. Mex.	.85
Pecos County*	.85
Pecos shallow†	.75

*Shell Petroleum Co., Gulf Pipe Line Co. and Humble Oil & Refining Co. †Shell Petroleum Corp.

Note—For Humble, Magnolia and Texas Co.'s West Texas and Lea County prices see gravity table. Above prices are those of other buyers.

Rocky Mountain States

(Effective January 9, 1936)

Iles, Colo., light*	$1.06
Iles, Colo., heavy*	1.00
Greybull, Wyo.*	1.28
Torchlight, Wyo.*	1.28
Grass Creek, Wyo., light*†	1.18
Grass Creek, Wyo., heavy*†	.72
Hamilton Dome, Wyo.*	.67
Elk Basin, Wyo., light*†	1.18
Frannie, Wyo., heavy*	.72
Frannie, Wyo., light (Feb. 24, 1936)*	.78
Hogback, N. Mex.*	1.21
Pondera, Mont., (Jan. 29, 1936)*	1.05
Salt Creek, Dutton Creek and Midway, Wyo., take Stanolind's Oklahoma prices on a gravity basis.	
Big Muddy, Wyo.†	1.11
Rock Creek, Wyo.†	1.12
Artesia, N. Mex. (Jan. 9, 1936)‡	.80
Maljamar, N. Mex. (Jan. 9, 1936)‡	.80
Fort Collins and Wellington, Colo. (Jan. 9, 1936)‡	See Note
Florence, Colo.	.93
Lance Creek, Wyo.	.85
Lost Soldier, Wyo. (Sept. 30, 1933)	.88
Hudson, Wyo. (June 2, 1931)	.65
Sunburst, Mont. (June 5, 1936)	1.15
Cat Creek, Mont.	1.28
Cut Bank, Mont.	1.35

*Stanolind Oil & Gas Co. †Ohio Oil Co. ‡Continental Oil Co.

Note—Fort Collins and Wellington are not posted, price 5 cents under quotation of Salt Creek crude of like gravity (Fort Collins 36°; Wellington 33°). *Stanolind Oil & Gas Co. †Ohio Oil Co. ‡Continental Oil Co. Cut Bank by Toronto Pipe Line Co.

Southwest Texas

(January 9, 1936)

Saxet	$.90
Mirando	.85
Pettus	1.25
Salt Flat*	.97
Salt Flat‡	.97
Darst Creek*	.97
Darst Creek†	.97
Luling	.90
Lytton Springs	1.00
Duval County	.85

*Humble Oil & Refining Co. †Magnolia Petroleum Co., Gulf Pipe Line Co. and Texas Co. ‡Shell Petroleum Corp. Saxet posted by Humble and Texas; Mirando by Humble and Magnolia; Pettus by Humble; Salt Flat by Humble; Luling and Lytton Springs by Magnolia; Duval by Texas Co.

Gulf Coast

(January 9, 1936)

Cleveland, Tex.	$1.10
Hardin, Tex.	1.03
Greta, Tex.	.90
Refugio, Tex., heavy	.90
Tomball, Tex.	1.30
LaFitte, La.	1.12
Livingston, Tex.	1.15
Bosco, La., (Jan. 16, 1936)	1.05
Evangeline, La.	1.07
Welsh, La.	.96

Cleveland and Hardin by Magnolia; Greta by Texas Co.; Refugio by Humble; Tomball by Humble and Magnolia; LaFitte by Texas Co.; Bosco by Pure; Evangeline and Welsh by Stanolind Oil & Gas Co.; Livingston by Shell Petroleum Corp.

Middle Western States

OHIO OIL CO.

Lima (Jan. 10, 1936)	$1.25
Illinois (Jan. 9, 1936)	1.23
Princeton, Ind. (Jan. 9, 1936)*	1.23
Midland, Mich. (June 15, 1936)*	1.42
Midland, Mich. (June 15, 1936) †	1.42
West Branch, Mich. (June 15, 1936)	1.26
Muskegon, Mich.	1.00
Eastern Kentucky:	
Big Sandy River (Jan. 9, 1936)	1.30
Kentucky River (Jan. 9, 1936)	1.38
Western Kentucky (Jan. 9, 1936)	1.23

*Posted by Pure Oil Co. and includes Greendale, Porter, Beaverton and Crystal crudes. West Branch, Mich., by Simrall Corp. Eastern Kentucky crude purchased by Ashland Refining Co., Ashland, Ky. Oceana posted by Old Dutch Refining Co. and Naph-Sol Refining Co. †Simrall Corp.

North Louisiana and Arkansas

Smackover, all grades (Jan. 10, 1936)*	$.75
Smackover, all grades (Jan. 9, 1936)†	.80
Tullos and Urania (Jan. 10, 1936)	.97
Nevada, Ark. (Jan. 10, 1936)	.65
El Dorado East field (Jan. 16, 1936)	.75
Converse, Holly, Pleasant Hill and Zwolle (Jan. 10, 1936)*	1.10
Lisbon, Ark. (Jan. 10, 1936)*	1.10
Elm Grove, La. (Jan. 10, 1936)	.80

*Stanard Oil Co. of Louisiana, Gulf Refining Co., Louisiana Oil Refining Co., Texas Co. (effective January 14) and Magnolia Petroleum Co. (effective January 16). Urania by H. L. Hunt Co. and Louisiana Oil Refining Co. Nevada by Standard of Louisiana, El Dorado East field by Magnolia Petroleum Co. Phillips Petroleum Co. (effective January 17), posts 75 cents for all grades in Union and Ouachita Counties, Arkansas.

Eastern States

TIDE WATER PIPE LINE CO.
(Effective Jan. 13, 1936)

Bradford, Pa.	$2.45
Allegany, N. Y.	2.45

SOUTH PENN OIL CO.
(Effective Jan. 13, 1936)

Pennsylvania Grade Oil in National Transit Lines (Bradford field)	2.45
Pennsylvania Grade Oil in Southwest Pennsylvania Lines	2.17
Pennsylvania Grade Oil in Eureka Pipe Line lines	2.12
Pennsylvania Grade Oil in Buckeye Pipe Line lines	1.97
Corning Grade Oil in Buckeye Pipe Line Co.'s lines	1.42

PENNZOIL CO.
(Effective Jan. 13, 1936)

Pennsylvania Grade Oil in National Transit Lines:	
Group A — Includes Cochran, Franklin, Hamilton and Doolittle districts.	2.42
Group B — Includes Titusville district.	2.41
Group C — Includes Turkey and Tidioute districts.	2.40
Group D — Includes Bear Creek and Porkey districts.	2.39
Group E — Includes Edeneau, Bull Creek, Rough Run, Carbon, Dipner, Bredlin, McJunkin, Jameson, Kenerdell, Emlenton, Tiona, Lacey and Kinzua districts.	2.36

Price depends on lengths of pipe line haul to plant at Oil City.

PURE OIL CO.
(Effective Jan. 13, 1936)

Cabin Creek, W. Va.	$2.12
Bradford Hollow, W. Va.	2.12
Kelly Creek, W. Va.	2.12

Canada

Ontario (Sept. 9, 1933):	
Petrolia*	$2.10
Oil Springs	2.17
Turner Valley (Feb. 3, 1936):†	
Clean naphtha	2.70
Discolored naphtha	2.46
Crude oil, 50 gravity	2.32
Crude oil, 45 to 49.9	2.12
Crude oil, 40 to 44.9	1.55

*Imperial Oil, Ltd. †Imperial Oil, Ltd. and Regal Oil & Refining Co.

Mexico

Panuco*	$ .895

*F.o.b. ship, based on August transactions and exclusive of production and export taxes and bar dues.

Crude Prices by Gravities

Gravity—	Oklahoma, Kansas, and Salt Creek, Wyo.	Central and North Texas	East Central Texas	North Louisiana, Arkansas	Gray County, Texas	Carson and Hutchinson Counties, Texas	Conroe, Texas	West Texas and Lea County, New Mexico	Gulf Coast, Texas and Louisiana	Anahuac and Dickinson, Texas	Iowa and Cameron Meadows, Texas
Below 20	....	....	....	....	....	....	....	....	$.92	....	$.82
20-20.9	....	....	....	....	....	....	....	....	.94	....	.84
21-21.9	....	....	....	....	....	....	....	....	.96	....	.86
22-22.9	....	....	....	....	....	....	....	....	.98	....	.88
23-23.9	....	....	....	....	....	....	....	....	1.00	....	.90
24-24.9	....	....	....	....	....	.....	....	....	1.02	....	.92
Below 25	$.86	....	....	$.78	....	....	....	....	....	....	....
25-25.9	.88	....	....	.80	....	....	....	....	1.04	....	.94
26-26.9	.90	....	....	.82	....	....	....	....	1.06	....	.96
27-27.9	.92	....	....	.84	....	....	....	....	1.08	....	.98
28-28.9	.94	....	....	.86	....	....	....	....	1.10	....	1.00
Below 29	.94	$.84	$.91	....	....	....	....	$.75	....	....	....
29-29.9	.96	.86	.93	.88	....	....	....	.76	1.12	....	1.02
30-30.9	.98	.88	.95	.90	....	....	....	.78	1.14	$1.04	1.04
31-31.9	1.00	.90	.97	.92	....	....	....	.80	1.16	1.06	1.06
32-32.9	1.02	.92	.99	.94	....	....	....	.82	1.18	1.08	1.08
33-33.9	1.04	.94	1.01	.96	....	....	....	.84	1.20	1.10	1.10
34-34.9	1.06	.96	1.03	.98	....	....	....	.86	1.22	1.12	1.12
Below 35	....	....	....	....	$.86	$.81	....	....	....	....	....
35-35.9	1.08	.98	1.05	1.00	.88	.83	$1.24	.88	1.22	1.14	1.12
36-36.9	1.10	1.00	1.07	1.02	.90	.85	1.26	.90	1.22	1.16	1.12
37-37.9	1.12	1.02	1.09	1.04	.92	.87	1.28	.90	1.22	1.18	1.12
38-38.9	1.14	1.04	1.11	1.06	.94	.89	1.30	.90	1.22	1.20	1.12
39-39.9	1.16	1.06	1.13	1.08	.96	.91	1.32	.90	1.22	1.22	1.12
40 and over	1.18	1.08	1.15	1.10	.98	.93	1.34	.90	1.22	1.24	1.12

Magnolia Petroleum Co. in the East Central Texas field pays 7 cents per barrel less than above posted prices in that field.

T. W. (Bill) Collins, superintendent of production for the Sinclair Prairie Oil & Gas Company in the Drumright district the last six years, has been transferred to Seminole. He was replaced by John Millar, of Drumright, transferred from the geological department to the production department. The change was effective September 1.

STANDARD OIL CO. OF CALIFORNIA AND UNION OIL CO.

Crude oil prices at the well effective June 22, 1936

Gravity—	Signal Hill (Long Beach)	Seal Beach	Alamitos Heights	Huntington Beach	Inglewood	Playa del Rey	Olinda-Brea Canyon	Athens-Rosecrans	Dominguez	Elwood Terrace	Torrance	Richfield	Whittier E. Coyote (La Habra)	Montebello	W. Coyote Hills	Santa Fe Springs	Mountain View	Elk Hills Buena Vista Hills Midway-Sunset Lakeview Area	Lost Hills	Coalinga	Wheeler Ridge	Kettleman Hills	Santa Paula*	Orcutt*
14-14.9	$.80	$.79	$.74	$.78	$.79	$.80	$.76	....	....	....	$.80	$.76	$.76	$.77	$.78	....	....	$.70	$.70	$.70	....	....	$.70	....
15-15.9	.80	.79	.74	.78	.79	.80	.76	....	....	....	.80	.76	.76	.77	.78	....	....	.70	.70	.70	....	....	.70	....
16-16.9	.80	.79	.74	.78	.79	.80	.76	....	....	....	.80	.76	.76	.77	.78	....	....	.70	.70	.70	....	....	.70	$.70
17-17.9	.80	.79	.74	.78	.81	.80	.76	....	....	....	.80	.76	.76	.77	.78	....	....	.70	.70	.70	....	....	.71	.70
18-18.9	.80	.79	.74	.78	.84	.80	.78	....	....	....	.82	.76	.76	.77	.78	....	....	.70	.70	.70	....	....	.73	.72
19-19.9	.82	.79	.74	.82	.87	.84	.81	....	....	....	.85	.76	.78	.77	.78	....	$.70	.74	.74	.71	$.70	....	.75	.74
20-20.9	.85	.79	.74	.85	.90	.88	.84	....	....	....	.88	.78	.82	.77	.80	....	.70	.78	.78	.72	.70	....	.77	.77
21-21.9	.88	.79	.74	.89	.93	.93	.88	....	....	....	.91	.80	.85	.77	.84	$.78	.73	.82	.82	.74	.70	....	.79	.80
22-22.9	.92	.82	.74	.92	.96	.98	.92	....	....	....	.93	.84	.89	.79	.88	.78	.77	.87	.86	.78	.72	....	.82	.83
23-23.9	.95	.86	.77	.96	.99	1.02	.96	$.84	$.79	....	.96	.88	.93	.82	.92	.78	.80	.92	.90	.82	.76	....	.85	.86
24-24.9	.99	.91	.80	1.00	1.02	1.06	.99	.88	.81	....	.99	.91	.96	.85	.96	.82	.84	.97	.94	.86	.79	....	.87	.88
25-25.9	1.03	.95	.82	1.03	1.05	1.11	1.03	.93	.83	....	1.02	.95	....	.89	.99	.86	.88	1.01	.98	.90	.83	....	.90	.91
26-26.9	1.06	1.00	.85	1.07	1.09	1.16	1.06	.98	.86	....	1.05	.98	....	.92	1.03	.90	.91	1.06	1.02	....	....	....	.92	.93
27-27.9	1.10	1.05	.88	1.11	1.12	....	1.10	1.03	.88	....	....	1.02	....	.96	1.06	.95	.95	1.10	1.06	....	....	....	.95	....
28-28.9	1.14	1.10	.90	1.14	1.15	....	1.14	1.07	.90	....	....	1.06	....	.99	1.10	.99	.99	1.15	1.10	....	....	....	.97	....
29-29.9	1.17	1.15	.93	1.18	1.18	F.O.B.	1.17	1.12	.93	....	....	1.09	....	1.03	1.14	1.03	1.02	1.20	1.14	....	....	....	.99	....
30-30.9	1.21	1.19	.95	1.22	1.21	our	1.21	1.17	.95	F.O.B.	....	....	....	1.07	1.17	1.08	1.06	1.25	1.18	....	....	....	1 01	....
31-31.9	....	....	....	....	1.24	Pipe	1.24	1.22	.97	Ship	....	....	....	1.11	1.21	1.12	1.09	1.29	....	....	....	....	....	....
32-32.9	....	....	....	....	1.27	Line	1.27	1.27	1.00	....	....	....	....	1.14	1.25	1.16	1.13	1.34	....	....	....	....	....	....
33-33.9	....	....	....	....	....	....	....	1.32	....	$1.28	....	....	....	1.18	1.28	1.20	1.17	1.38	....	....	....	$1.19	....	....
34-34.9	....	....	....	....	....	....	....	1.37	....	1.32	....	....	....	1.22	1.32	1.25	1.20	....	....	....	....	1.23	....	....
35-35.9	....	....	....	....	....	....	....	1.42	....	1.35	....	....	....	1.25	....	1.29	....	....	....	....	....	1.27	....	....
36-36.9	....	....	....	....	....	....	....	1.46	....	1.39	....	....	....	1.29	....	1.33	....	....	....	....	....	1.31	....	....
37-37.9	....	....	....	....	....	....	....	1.51	....	1.43	....	....	....	1.32	....	1.37	....	....	....	....	....	1.35	....	....
38-38.9	....	....	....	....	....	....	....	1.56	....	....	....	....	....	1.36	....	1.42	....	....	....	....	....	1.39	....	....
39-39.9	....	....	....	....	....	....	....	1.61	....	....	....	....	....	1.40	....	....	....	....	....	....	....	1.43	....	....
40-40.9	....	....	....	....	....	....	....	1.66	....	....	....	....	....	1.43	....	....	....	....	....	....	....	....	....	....

Newhall, McKittrick, Kern River, Kern Front and Round Mountain, 70 cents for all grades. Santa Paula and Orcutt posted by Union Oil Co. Same company's Brea Canyon schedule stops at $1.14 for 28 degrees and over, and Belridge and Lost Hills schedule stops at $1.32 for 37 degrees and over.

MARKET RECORD, ACTIVE OIL STOCKS

Compiled by Carl H. Pforsheimer & Co., 25 Broad Street, New York City, Members New York Stock Exchange and New York Curb Exchange

New York Stock Exchange

1936 High	1936 Low	Week ended Sept. 12 Sales	Week ended Sept. 12 High	Week ended Sept. 12 Low	Week ended Sept. 12 Close	Stocks—	Total shares outstanding	Par value	Dividend rate	Payable or last paid	Dividends paid in 1935	1935 High	1935 Low	1934 High	1934 Low
125½	75	2,200	94	90	91	Amerada Corp.	788,675	N.P.	50cQ	7-31-36	$2.00	80	48½	55⅝	39
35⅛	26⅝	7,700	28⅝	27½	27⅝	Atlantic Refining	2,664,904	$25	25cQ	9-15-36	1.00	28	20½	35¼	21½
20	14⅛	10,100	18½	17⅜	17⅜	Barnsdall Corp.	2,131,090	$5	20cQ	11-2-36	‡.20	14¾	5⅞	10	5⅞
23⅜	14	30,500	21½	20½	20⅞	Columbia Gas & Elec.	11,610,036	N.P.	20c	5-15-36	.20	15¾	3⅝	19¼	6⅝
15¼	11½	36,000	12¾	12¼	12⅜	Consolidated Oil Corp.	13,983,287	N.P.	15cQ	8-15-36	.25	12¼	6½	14¼	7¼
38½	28⅛	13,500	31½	29¾	30	Continental Oil of Delaware	4,682,671	$5	25c	7-31-36	.62½	35	15½	22¾	15¾
34¾	21	7,600	26⅜	24½	25	General Asphalt	387,149	$10	25c	12-17-35	.25	22½	11¾	23½	12
12¼	6⅜	17,400	9¾	9	9	Houston Oil (new)	1,098,618	$25	....	10-17-30	....	7	1½	5⅝	2½
23¾	17¼	11,900	23⅛	21¾	23	Mid-Continent Petroleum	1,843,872	$10	40cSA	6-1-36	.40	20½	9½	14¾	9⅛
26¼	16¾	900	20⅛	19¼	19½	Mission Corporation	1,399,345	N.P.	....	.....	.....	17¾	10⅝	..	..
69½	19⅞	1,700	60¼	58⅝	59	National Supply of Delaware	382,591	$25	....	5-15-31	....	20⅞	9	21⅛	10
17½	12⅛	13,600	13¼	12¾	12¾	Ohio Oil Co.	6,563,377	N.P.	25cSA	6-15-36	.30	14¼	9¼	15⅞	8½
18	11¾	2,800	15⅛	14½	15	Pacific Western Oil	1,000,000	N.P.	40c	11-30-34	.25	14	6⅜	9⅜	5½
4¼	1⅝	100	2½	2½	2½	Panhandle P. & R.	198,770	N.P.	....	.....	....	1⅞	½	2½	⅝
49⅜	38⅛	15,900	42¾	40⅞	40⅞	Phillips Petroleum	4,152,836	N.P.	50cQ¶	9-1-36	1.25	40	13¾	20¾	13⅝
17¼	11⅞	9,700	17	16¼	16⅝	Plymouth Oil Co.	1,050,000	$5	25c	9-30-36	.25	13	6½	16⅜	7¼
24⅞	16	46,400	18	16¾	17⅝	Pure Oil Co.	3,038,370	N.P.	....	9-1-30	....	17	5⅞	14⅞	6⅛
43⅝	30½	4,900	33	32	32¼	Seaboard Oil of Delaware	1,244,283	N.P.	25cQ	9-15-36	1.00	36⅞	20¾	38⅝	20¾
21½	14⅜	40,900	21½	19⅛	21½	Shell Union Oil	13,070,625	N.P.	....	6-30-30	....	16½	5½	11½	6
124	110½	2,600	124	120	124	Shell Union Oil pfd.	400,000	$100	1.37½	7-1-36	....	111	63⅛	89	57
6¾	3½	2,000	4¼	4	4	Simms Petroleum	461,698	$10	1.25 liq.	7-20-36	11.75 liq.	18¾	4¾	17⅛	7¼
31½	19½	2,000	26½	26	26	Skelly Oil	1,008,514	$15	....	12-15-30	....	20½	6½	11½	6
17	12½	39,900	13⅞	13⅜	13⅜	Socony-Vacuum	31,151,075	$15	25cSA	9-15-36	.30	15¾	10⅝	19⅞	12½
47⅝	35	14,500	37⅛	36⅛	36⅝	Standard Oil of California	13,014,754	N.P.	30cQ¶	9-15-36	1.00	41⅛	27¾	42⅞	26½
40⅛	32¾	8,900	38	37¼	37⅝	Standard Oil (Indiana)	15,215,677	$25	25cQ†	9-15-36	1.00	33⅜	23	32¾	23¼
30	25	No sales	..	..	..	Standard Oil of Kansas	200,000	$10	....	10-31-34	....	32	20	41	26
70	51⅛	19,500	63⅝	62	62½	Standard Oil of New Jersey	25,856,081	$25	75cSA¶	6-15-36	‖1.25	52⅜	35¾	50⅛	39¼
91	72	400	79¾	79	79	Sun Oil	1,733,013	N.P.	25cQ	9-15-36	$1 & 7% Stk.	77	60½	74¼	51½
40	28⅞	15,400	38⅜	37	37½	Texas Corp.	9,340,069	$25	25cQ†	10-1-36	1.00	30¼	16½	29⅜	19⅝
15¼	7½	4,800	12⅛	11¼	11½	Texas Pacific Coal & Oil	880,703	$10	25c	8-1-36	....	9¼	3¼	6½	2½
19⅛	14¾	17,300	17¼	16½	17	Tide Water Associated	5,642,342	N.P.	15cQ	9-1-36	....	15⅞	7⅝	14⅜	8
106½	100⅝	600	105	104⅝	104⅝	Tide Water Associated pfd.	626,221	$100	$1.50Q	7-1-36	$6.50	104½	84	87	64½
28½	20¾	4,400	22	21⅛	22	Union Oil of California	4,386,070	$25	25cQ	8-10-36	1.00	24	14¾	20½	11½
31⅝	22⅝	1,000	28⅛	27⅝	27¾	Union Tank Car Co.	1,200,000	N.P.	30cQ	9-1-36	1.20	26½	20⅞	25¾	15⅝
5¼	2¾	600	3½	3¼	3½	Wilcox Oil & Gas	424,839	$5	....	5-10-28	....	3½	1	5¼	2

*Ex-dividend. †Plus extras. ‡Also 50 per cent in stock of Barnsdall Ref. §Partly on account of accumulation. ‖Dividend 4/75 Mission Corp. paid 3-15-35. ¶Includes extras.

New York Curb Exchange

1936 High	1936 Low	Week ended Sept. 12 Sales	Week ended Sept. 12 High	Week ended Sept. 12 Low	Week ended Sept. 12 Close	Stocks—	Total shares outstanding	Par value	Dividend rate	Payable or last paid	Dividends paid in 1935	1935 High	1935 Low	1934 High	1934 Low
21	13¼	5,700	19½	18⅝	19½	Bridgeport Machine Co.	260,000	N.P.	....	5-1-30	....	14⅛	3¾	3¾	⅛
50	39¾	500	44½	44	44½	Buckeye Pipe Line Co.	200,000	$50	75cQ	9-15-36	$3.00	42½	30½	38	26
4⅞	1⅞	2,800	2⅜	2⅛	2⅛	Carib Syndicate	799,020	25c	....	.....	....	4¼	1⅝	5½	1½
124¾	105	No sales	..	..	..	Chesebrough Mfg. Co.	120,000	$25	$1.50Q	9-30-36	6.50	157	115	150	116
7⅜	3	26,400	4¼	4	4⅛	Cities Service	37,804,394	N.P.	....	6-1-32	....	3¼	¾	4¼	1¼
4	⅝	200	⅞	⅞	⅞	Colon Oil	2,200,000	N.P.	....	.....	....	2⅛	½	3¼	½
4⅛	1½	4,300	2⅞	2½	2⅝	Cosden Oil	399,687	$1	....	.....	....	1½	¼	3⅞	⅛
34¾	19⅞	13,400	24¾	23¼	24	Creole Petroleum	6,974,356	$5	25c	7-15-36	.20	23¾	10	14⅜	9⅝
12	9	700	10¾	10¼	10¼	Darby Petroleum	351,390	$5	25cSA	7-15-36	.50	8⅞	4	7½	4⅛
4⅝	1⅞	200	3⅞	3⅝	3⅞	Derby Oil & Refining	263,162	N.P.	....	.....	....	2	¾	2¼	1
44	39	No sales	..	..	..	Eureka Pipe Line	50,000	$50	$1Q	8-1-36	4.00	38	33¼	37	30
98	72	11,100	96⅛	88¼	86	Gulf Oil Corp.	4,538,101	$25	25c	10-1-36	....	74¾	50¼	76¾	49¾
76½	57	4,000	66⅜	63¾	64⅛	Humble Oil & Refining (new)	8,923,935	N.P.	50c†	10-1-36	1.25	64	44	49½	33¼
24½	20	3,600	20⅝	20½	20⅝	Imperial Oil of Canada	26,919,871	N.P.	62½cSA†‡	6-1-36	1.25	22½	15⅜	17⅞	12⅝
9¼	5½	700	8¾	8½	8¾	Indiana Pipe Line	300,000	$10	20cSA	5-15-36	.35	6⅛	3⅝	6⅞	3⅝
39⅝	32⅞	4,800	35½	33¾	35¼	International Petroleum	14,247,088	N.P.	$1.25†‡	6-1-36	2.50	39¾	28	33⅜	19⅜
15⅜	9⅞	3,500	12⅞	12½	12½	Louisiana Land & Exp.	3,000,000	N.P.	10cQ	6-15-36	.10	11⅜	4⅜	5	2⅛
15	7⅜	1,700	13¾	13	13¾	Lion Oil Refining	270,000	N.P.	....	10-27-30	....	8½	3½	6	3⅜
14¼	9⅞	7,700	13⅝	13¼	13½	Lone Star Gas	5,382,723	N.P.	20cSA	8-15-36	.30	10⅞	4½	8⅜	4¼
8⅜	5	2,400	5¾	5⅝	5¾	Mountain Producers	1,682,182	$10	30cSA	7-1-36	.90	5¾	4⅛	5½	4
23	17⅝	3,700	20½	19¼	20¼	National Fuel Gas	3,810,183	N.P.	25cQ	7-15-36	1.25	20	11¾	18⅛	13⅛
15¾	9¼	1,700	12	11⅛	11½	National Transit	509,000	$12.50	40cSA	6-15-36	.75	10⅝	6¾	9½	7
4½	2⅞	900	3¼	3⅛	3¼	New Bradford Oil	1,445,202	$5	10cSA	5-15-36	.20	3¼	2	2½	1¾
6⅝	1⅝	400	2¾	2½	2½	New Mexico and Arizona	1,000,000	$1	....	.....	....	2½	1	2¾	1
16¼	4½	200	5½	5½	5½	New York Transit	100,000	$5	15cSA	4-15-36	.30	4⅞	3	4¾	3
9¼	4⅞	1,700	9¼	9	9	Northern Pipe Line	120,000	$10	15cSA	7-1-36	.50	8	5¼	7	4⅝
6⅝	3¼	29,300	5½	5	5⅛	Pantepec Oil	1,608,700	N.P.	....	.....	....	4⅜	1¼	2⅝	⅞
19¼	4½	4,500	16	15½	16	Root Petroleum Co.	336,045	$1	25c	8-1-36	....	5	1½	..	..
4¾	1⅞	200	3¼	3¼	3¼	Ryan Consolidated	296,931	N.P.	....	.....	....	2½	⅝	3⅜	⅞
10	7	1,700	7¼	7	7	Salt Creek Producers	1,496,859	$10	40cSA	6-30-36	1.20	7½	5½	7⅞	5½
40½	32½	1,300	40¼	39	39	South Penn Oil	1,200,000	$25	60c†	9-30-36	1.35	34½	21⅝	26½	17½
7⅞	3¼	100	4¼	4¼	4¼	Southern Pipe Line	100,000	$10	15cSA	3-2-36	.30	5	3⅞	5½	3½
60	54	No sales	..	..	..	Southwest Penna. Pipe Lines	35,000	$50	$1.00Q	10-1-36	5.00	56	44¼	47	41
23⅜	17⅛	2,200	19⅞	19⅛	19⅛	Standard Oil of Kentucky	2,604,790	$10	35c	9-15-36	1.25	24	18	18⅜	14⅝
23⅜	17⅛	200	12	12	12	Standard Oil of Nebraska	188,403	$25	....	6-20-34	....	12	7¾	16⅞	8¼
36¼	21¾	2,200	33½	31	31	Standard Oil of Ohio	753,740	$25	25c	10-15-36	....	23⅝	11½	28½	12¼
5	2⅝	7,300	3⅝	3⅜	3⅜	Sunray Oil	1,610,810	$1	....	4-15-31	....	2⅞	⅞	2	⅛
9¾	5½	800	6	5⅝	5⅝	Texon Oil & Land	336,028	N.P.	15cQ	9-30-36	.60	6⅞	5	11	4⅝
7½	4⅜	5,900	4⅝	4⅜	4⅜	Texas Gulf Producing Co.	888,085	N.P.	....	12-29-34	....	4¾	2½	7	3⅜

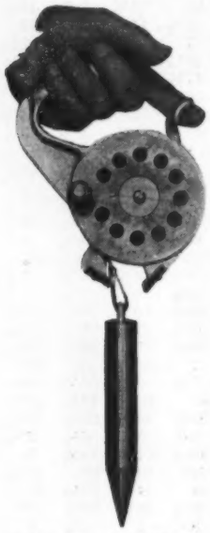
*Ex-dividend. †Includes extras. ‡Payable in Canadian funds.

Note—In comparing highs and lows for the several years in the two tables, it will be necessary to take into consideration cases where there have been stock split-ups

NEW OR IMPROVED EQUIPMENT

Positive, Adjustable Braking a Feature of Gauging-Reel

Positive and adjustable braking is a feature of the new Tulsa gauging-reel which will be appreciated by anyone who, while gauging a tank has controlled the gauge-line playout with the thumb or slid the line through the fingers, sometimes cutting them. The wiping device will be appreciated too by the man who, having gauged a tank, has started to retrieve the line by lariating it out on top of the tank, at the same time wiping the oil from the gauge-line with a rag held in one hand, or placing the rag under one foot and pulling and winding the gauge-line at the same time.



The reel is equipped with ball bearings and by driving the plumb-bob hook into the reel-housing the plumb-bob is carried on the hook instead of swinging on the gauge-line, which eliminates breakage. The wiping-pads are of synthetic rubber and are impervious to any oils. They are reversible to compensate for wear. This new reel is distributed by the W. L. Walker Co., 1001 South Main Street, Tulsa, Okla.

Bulletins, Booklets and Other Literature for the Trade

The fourth edition of Service Man's Guide to Automotive Lubrication, entirely rewritten by J. Howard Pile, is announced by Chek-Chart Corp., 624 South Michigan Avenue, Chicago. The book, bound in fabrikoid, is sold for $2, with lower prices on large quantities.

"Moot Questions in Welding" and "Checking Valve Character" are among articles in the current issue of Valve Values, published by the Edward Valve & Manufacturing Co., Inc., East Chicago, Ind.

The Oilwell 27½-inch oilbath rotary model 35 is the subject of an eight-page bulletin offered by the Oil Well Supply Co., Dallas, Tex.

The current number of the Hercules Record, published by A. Leschen & Sons Rope Co., 5809 Kennerly Avenue, St. Louis, Mo., contains an excellent illustration of a rotary drilling rig at work in the Rodessa field.

The history of oil in California forms the leading article of an exceptionally attractive number of the Lufkin Line, published by the Lufkin Foundry & Machine Co., Lufkin, Tex.

"Stress Relief for Pipe Welds" is the title of a six-page bulletin prepared by the Detroit Electric Furnace Co., 825 West Elizabeth Street, Detroit, Mich.

The American Radiator Co., 40 West Fortieth Street, New York, is sending on request bulletins describing Ideal-Arco accessories, including the Arco packless valve; air, vacuum and vent valves; regulators and controls for steam, water and vapor; gauges, thermometers, tanks, boiler-cleaners, etc.

"Where the Fish Are Biting—An Examination of Sales Trends" is told in the current number of Cochrane News, published by the Cochrane Corp., Philadelphia, Pa.

Articles on mobile and stationary industrial power make up the current of Powertrax, published by the International Harvester Organization, 606 South Michigan Avenue, Chicago.

Control by meter is the subject of a 20-page booklet being distributed by the Neptune Meter Co., 50 West Fiftieth Street, New York. It gives information on meters for bulk plants, tank-trucks, loading-racks, etc.

The 1936 edition of the Johns-Manville industrial products catalog is now available. This 60-page book, profusely illustrated, contains a wealth of information and recommendations on high and low temperature insulations for every industrial need.

Equipment and service provided by the Bridgeport Machine Co., Wichita, Kans., are discussed on the latest issue of the Bridgeport Bulletin.

Men Widely Known in the Equipment Field

Glen J. Christner, formerly in charge of the Eagle-Picher Lead Co.'s New York insulation division, has been transferred to Cincinnati as manager of the entire insulation division. Mr.

GLEN J. CHRISTNER

Christner graduated from the Missouri School of Mines in 1922. He was in the sales department of the Ingersoll-Rand organization when he was assigned to Tokyo, Japan, later being brought back and placed in charge of far eastern business.

Elevator Bail Protected From Wear by Cushion of Rubber

A cushion, applied to the swivel, for protection of elevator bails against wear has been developed by the California Bettis Co., operating under a patent issued to H. C. Dye, of Bakersfield, Calif. The bumper consists of a cylinder of resilient rubber manufactured by the Patterson-Ballagh Corp. of Los Angeles. The bracket is furnished as standard equipment by a number of swivel manufacturers and as a separate unit to install on swivels already manufactured and in the field. On units using the Byron Jackson safety hook a special double-length bumper is used.

The rubbers in these bumpers are replaceable when worn out, but as no active abrasion takes place, the rubbers should last for long periods.

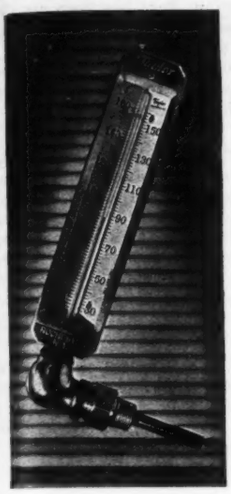
Owing to the metal-to-rubber contact instead of metal-to-metal, the noise in the derrick is reduced to a minimum. It is estimated that bails must be replaced when a one-fourth inch notch is worn in them. Use of these bumpers causes a great reduction in the wear in the tips of the bails and in the wear in the hook itself. A squeezing effect takes place between the swivel bail and the elevator bail which causes the hooks to wear and, when they wear, the weight is thrown ahead, causing the hook to be off-center. This puts a tremendous overload on the hook, generally without the operator becoming aware of this situation.

J. & L. to Have Pilot Plant

A miniature steel works for developing the discoveries of its research engineers will be constructed by the Jones & Laughlin Steel Corp., Pittsburgh, Pa. The midget plant will be equipped with actual steel-making units capable of duplicating operations in the big mills necessary to manufacture iron and steel. In the past it has been the general practice to turn over the discoveries of research engineers to the regular manufacturing departments for testing and development. Under this new system Jones & Laughlin engineers will develop and test their ideas in the new "pilot plant" where they will have entire control of the miniature steel-making equipment which will include an iron cupola, an open-hearth furnace, a Bessemer converter, a blooming mill, and various finishing devices. Scientists will be able to start with the raw material, take it step by step through the blooming, rolling, shaping, and finishing operations and turn out steel products on which they will have a complete and accurate history. The engineers thus can test their ideas under a variety of operating conditions not possible in the regular manufacturing departments.

Readability of Thermometers Is Improved in New Design

Mercury-in-glass industrial thermometers are hard to read except at close range and under favorable lighting conditions. The Taylor Instrument Companies, Rochester, N. Y., say they have corrected this difficulty in their new thermometer tubing "Binoc." Advantages are said to include more than twice the accustomed angle of vision combined with high magnification of the mercury column; binocular vision (i.e., readability with both eyes) at normal or greater than normal distances; triple-lens construction, affording three times as much light and concentrating it behind the mercury column, making the column stand out in sharp relief. Confusing empty-bore reflections are eliminated by the scientifically determined lens angle and extended opaque background.



The legibility of these new Taylor industrial thermometers is further improved by the bold, black numerals and graduations on the cream-tinted, nontarnishing scale.

New Spout Simplifies Pouring

Facility in pouring small quantities of any liquid from a completely filled 5-gallon pail is provided by a telescopic pour spout announced by the Rheem Manufacturing Co. The radius of the curve on which the sections operate has been reduced, giving the edge of the spout a longer projection over the rim of the pail and permitting the regulation of the stream from a few drops to the full capacity of the spout. When completely telescoped, the spout nests into the opening, at the base of which are perforations through which any surplus liquid drains back into the pail. The spout is provided with a cap which can be removed or replaced as often as desired and which seals the contents against leakage and evaporation. An internal vent tube permits entrance of air, insures full flow without gurgling and waste and speeds up pouring.

Here and There With Men Who Manufacture Equipment

The name of Chas. Millar & Son Co., Utica, N. Y., has been added to the list of Enduro stainless steel distributors appointed by N. J. Clarke, vice president in charge of sales, Republic Steel Corp., Cleveland, Ohio.

At a recent meeting of the board of directors of A. M. Lockett & Co., Ltd., C. C. Crawford was elected vice president. Mr. Crawford is a graduate in mechanical engineering of Tulane University and a member of the American Society of Mechanical Engineers.

The New York office of the Timken Steel & Tube Co., Arthur R. Adelberg, district manager, is now at 165 Broadway. It formerly was in the Timken Roller Bearing Co. offices at 16 West Sixtieth Street.

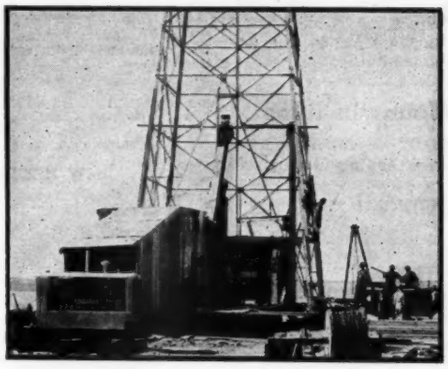
George W. Keller, formerly vice president of the Brown Instrument Co. is now in charge of the Eastern sales division of the Wheelco Instruments Co. of Chicago, manufacturer of pyrometric heat control devices.

R. B. Nichols has been appointed manager of the industrial bearing division of the Bantam Ball Bearing Co. Mr. Nichols was factory superintendent for four years previous to becoming manager of the Chicago office, where he spent the past eight years.

D. E. Bates, president and general manager of the Reo Motor Car Co., Lansing, Mich., announces that hereafter the company will concentrate exclusively on the manufacture of commercial vehicles. "We feel," he says, "that the day has passed when trucks and buses can be considered as sidelines."

Frederick S. Cook has been appointed Pacific Coast manager for Robert W. Hunt Co., engineers, with headquarters in San Francisco. Mr. Cook graduated from Columbia University with a degree of Engineer of Mines, in 1905. He is a member of the American Institute of Mining and Metallurgical Engineers.

OPERATED BY DIESEL UNIT

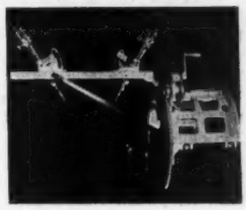


Powering this oil well in the Russell, Kansas, field is a "Caterpillar" 125-horsepower diesel engine belted to a standard cable tool rig. The owner is Orville J. Lee of Wichita. The installation when completed will include telegraph control by means of a 24-inch bar mounted on the control cross-shaft and by two cables to the well flow.

One Man Operates Machine for Cutting and Beveling

The H and M pipe-cutting and beveling machine, constructed principally of aluminum, is easily portable and can be operated by one man. All units are designed for one or two-torch operations. Torches can be set at any angle specified, as the holders are graduated so that they may be rapidly set. Torches can be removed from the holder by the turn of a wing nut.

The machine is so constructed with its horseshoe-shaped gear that it may be slipped over the pipe at any place where the cut is to be made. To complete the operation it is only necessary to set a chain-fastener, locking the machine to the pipe, light the torch and turn the crank which revolves the torch.



Machines are made in three standard sizes. No. 1 cuts from 4- to 8-inch pipe. No. 2 cuts from 8- to 12-inch. No. 3 cuts from 14- to 20-inch. Any standard torch fits the machine, which is manufactured and sold by H and M Pipe Beveling Machine Co., 20 East 25th Street, Tulsa.

Combination Lighting Unit

A new combination mercury and incandescent lamp lighting unit, announced by the Benjamin Electric Manufacturing Co., Des Plaines, Ill., combines the light from a 250-watt mercury lamp and one 300-watt or two 150-watt incandescent lamps, resulting in a soft and diffused light which seems to provide an especially high degree of eye comfort and gives a more pleasant light than that provided by either mercury lamps or incandescent lamps alone. The mixing of the yellow-green light rays of the mercury lamp and the predominantly red rays of the incandescent lamp in this new combination fixture provides a light which is recommended wherever good lighting for better seeing and more accurate work is required.

"WELCOME!" SAYS VETERAN OF 86 TO NEW MEMBER

W. W. Hanold (center), 86, who scorns retirement and goes to work every day at the general offices of the Johns-Manville Corp. in New York, welcomes a "youngster," J. S. Carroll, industrial vice president of J-M and former director of the American Petroleum Institute, as the 218th member of the company's Quarter Century Club. Left is Lewis H. Brown, president of the company and organizer of the club.

Mr. Carroll began his J-M career 25 years ago as a general salesman in the Philadelphia office. He became metropolitan sales manager in New York a few years later and was made vice president in 1923. He has given special attention to oil problems, including conservation of fuel, conservation of gasoline in storage and protection of oil lines against soil corrosion.

President Brown presented Mr. Carroll with a gold watch and a gold chain of 17 links, on each link of which were engraved initials of J-M men with whom he has been closely associated in his oil industry activities for more than 10 years.

Panhandle Completions

Carson County

Means and others No. 2 Cooper, 2,983-97 feet, shot, 928 bbls. on pump. Empire Gas & Fuel Co. No. 5-D Magnolia, 2,989-3,077 feet, shot, 856 bbls. on pump. Texoma Natural Gas Co. No. 4-T Burnett, gas pay 2,210-2,475 feet, initial production 28,485,000 feet gas.

Gray County

Danciger Oil & Refining Co. No. 10 Barrett, 3,246-96 feet, shot, 966 bbls. on pump. Warner Oil Co. No. 2 Chapman, 2,645-52 feet, 2,755 bbls. Danciger Oil & Refining Co. No. 9 Barrett, 3,237-3,300 feet, shot, 670 bbls. on pump. Dyck Oil Co. No. 5 McConnell, 3,187-3,290 feet, 410 bbls. on pump; Empire Gas & Fuel Co. No. 3 Noel, 3,200-30 feet, shot, 374 bbls. on pump. Niapa Oil Co. No. 3 Leopold, 3,293 feet, total depth, shot, 659 bbls. on pump. Shell Petroleum Corp. No. 3-A Sanders, 2,759-2,805 feet, shot, 58 bbls. on pump.

Hartley County

Beck and others No. 1 Matador Ranch, dry and abandoned, 4,600 feet; elevation, 3,536 feet.

Hutchinson County

Gulf Oil Corp. No. 61 Dial, 2,995-3,102 feet, shot, 391 bbls. on pump. S. & M. Oil Co. No. 5 Moore-Langdon, 3,050-89 feet, 587 bbls. on pump. Phillips Petroleum Co. No. 6 Perkins, 2,095-2,991 feet, shot, 181 bbls. on pump. Stekold-Producer No. 2 Wisdom, 3,020-3,142 feet, shot, 249 bbls. on pump. Niapa Oil Co. No. 3 Haile, 3,003-75 feet, shot, 460 bbls. on pump. Stanolind Oil & Gas Co. No. 7 Moore & Langdon, 3,035-95 feet, shot, 342 bbls. on pump. Travis Oil Co. No. 3 Hodges, 3,020-85 feet, shot, 492 bbls. on pump.

Moore County

Anderson & Kerr Petroleum Corp. No. 3 Wilber, 2,745-3,113 feet, shot, 40,461,000 feet gas. Shamrock Oil & Gas Co. No. 1-A Burnett, total depth 3,557 feet, plugged back to 3,529 feet, shot, 27,800,000 feet of gas.

Wheeler County

Barnett Petroleum Co. No. 3 Stewart, 2,098-2,118 feet, 89 bbls. on pump. Skelly Oil Co. No. 23 Johnson, 2,530-60 feet, 1,292 bbls. on pump. Smith Brothers No. 1 Clark, 1,996-2,727 feet, 27,800,000 feet gas. Same operators No. 2-C Harlan, 2,535-49 feet, 23 bbls. on pump.

Rocky Mountain Runs

Estimated daily average production for the week ending September 12 follows:

WYOMING

Salt Creek	16,340
Big Muddy	1,490
Badger Basin	40
Black Mountain	170
Byron	1,130
Dallas Derby	600
Dutton Creek	60
Elk Basin	470
Ferris	20
Frannie	390
Garland	140
Grass Creek	1,180
Hamilton dome	430
Hidden dome	440
Hudson	300
LaBarge	1,080
Lance Creek	5,600
Lost Soldier	860
Mule Creek	150
Midway	30
Oregon Basin	3,840
Osage	820
Pilot Butte	30
Quealy dome	70
Rock River	1,430
South Casper	520
Poison Spider	190
Teapot	20
Total Wyoming	37,840

MONTANA

Buckley Border	180
Cat Creek	750
Cut Bank	11,200
Kevin-Sunburst	4,500
Lake Basin	40
Pondera	1,250
Total Montana	17,920

COLORADO

Florence	220
Ft. Collins and Wellington	320
Iles dome	3,720
Moffat	510
Orchard	70
Rangely	60
Tow Creek	150
Total Colorado	5,050

NEW MEXICO

Artesia	700
Cooper	7,250
Eunice	23,920
Hobbs	22,180
Hogback	300
Jal	3,300
Lea	1,220
Maljamar	2,310
Monument	15,020
Rattlesnake	630
Table Mesa	90
Total New Mexico	76,920
Total Rocky Mountain region	137,730

L. P. Teas, Gulf Coast division geologist for Humble Oil & Refining Co., Houston, Tex., has been appointed assistant chief geologist, a newly created position. L. T. Barrow is chief geologist. Morgan J. Davis has been appointed to succeed Mr. Teas as division geologist.

Bert Haigh, adjunct professor of geology in the Texas School of Mines at El Paso, has been placed in charge of the geological office of the Texas University lands at San Angelo, Tex. J. N. Gregory, formerly in the department of the state, has resigned to enter consulting work at Midland, Tex.

Nan H. Small, secretary to W. K. Whiteford, vice president, British-American Oil Producing Co., Tulsa, has just reported back from a vacation trip spent in cool Chicago.

Tom Starrett, superintendent of the Atlantic Oil Producing Co., in West Texas, and Earl Darr, representative for Black, Sivalls & Bryson, Inc., Odessa, Tex., have been attending the Frontier Centennial at Fort Worth, Tex., and the Central Centennial at Dallas, Tex.

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NOTICE to reputable OIL OPERATORS or brokers desiring representation in Kansas for securing or locating or for checking properties. Am located in central Kansas. References. Box H-424, The Oil and Gas Journal, Tulsa, Oklahoma.

SELL or Trade 3 producing Royalties in Oklahoma City field paying $20 to $40 per month. One or all three at reasonable prices. Write 515 Radio Central Bldg., Spokane, Washington.

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FOR SALE — 2—55,000 bbl. Steel Tanks with steel roofs, practically new, knocked down ready to ship. Westerly Supply Company, Box 217, Wink, Tex.

FOR SALE—Gaso Portable Pumping Unit, 3½"x10", powered with Waukesha motor. GENERAL MACHINE & SUPPLY CO., Wichita Falls, Texas.

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90 A. in Sec. 32-10N-4West
110 A. in Sec. 32-10N-4West
225 A. in Sec. 6-8N-5West
E. E. McDowell, Verden, Okla., R. 1

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LEA County, New Mexico, has largest oil production any county in U. S. New Producers daily. For leases near drilling locations write Staplin & Staplin, Santa Fe, New Mexico.

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DRILLING OPERATORS or OIL PRODUCERS, Should you be in need of acreage for a well or developing—advise if interested in outright purchase of leases, or deal along other lines, and whether proven—semi-proven—or wildcat, and if (shallow) or (deep) pay, and the states interested. Many available worthy of an investigation. Address Box H-441, The Oil and Gas Journal, Tulsa, Okla.

WANTED drilling acreage (Shallow) In oil trend. Prefer on structure, in Texas, must check for real Possibilities. Outright Purchase unlikely interested. Box 414, Larned, Kansas.

Leases—Production

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NEEL $7,500.00 to finish deep test in Colorado. Will give pipe for security, acreage bonus. Reliable small company. Can finish in thirty to sixty days.
Box H-430
The Oil and Gas Journal,
Tulsa, Oklahoma.

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Or superintendent, 8 years in responsible positions. Also broad experience in oil field construction and general engineering work. Technical graduate, best of references. Box H-414, The Oil and Gas Journal, Tulsa, Oklahoma.

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Fair Bldg. Fort Worth, Texas

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1 Inch	*26*	*times*	*4.00 per inch*
1 Inch	*52*	*times*	*3.50 per inch*

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Classified advertising rates: First insertion, 35 cents a line; each additional insertion, 25 cents a line, PAYABLE IN ADVANCE. Six words usually make a line. Count as a word each one-letter word and each group of figures. White space computed at regular line rate. Allow two extra lines for blind ads. Ads of less than three lines not accepted. No formal acknowledgment is made, and proofs cannot be shown in advance of publication.

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4 Lines	*1.40*	*2.40*	*3.40*	*4.40*	*8 Lines*	*2.80*	*4.80*	*6.80*	*8.80*
5 Lines	*1.75*	*3.00*	*4.25*	*5.50*	*9 Lines*	*3.15*	*5.40*	*7.65*	*9.90*
6 Lines	*2.10*	*3.60*	*5.10*	*6.60*	*10 Lines*	*3.50*	*6.00*	*8.50*	*11.00*

We reserve the right to withhold all advertising of questionable character. To avoid delay be sure to send remittance with copy. We will set your ad in the smallest amount of space possible and refund all overpayments. One-time insertions will not be run until fully paid. Forms close MONDAY NOON before each issue date.

THE OIL AND GAS JOURNAL
Tulsa, Oklahoma

INDEX TO ADVERTISERS

A

Abercrombie, J. S., Co. 63
Abercrombie Pump Co. .....
Air-Maze Corporation .....
Air Reduction Sales Co. .....
Alco Products, Incorporated .....
Aldrich Pump Co., The .....
Allegheny Steel Company 62
Allis-Chalmers Mfg. Co. .....
Allsteel Products Mfg. Co., The .....
American Askania Corp. .....
American Cable Co., Inc. .....
American Hammered Piston Ring..
American Iron & Machine Works..
American Lubricator Company ....
American Manganese Steel Company
American Meter Company .....
American Roller Bearing Company.
American Sand-Banum Co., Inc. ...
American Seismograph Company ..
American Steel & Wire Company..
Appleman Bit Service Co. .....
Arrowhead Iron Works .....
Athey Truss Wheel Co. .....
Atlas Drop Forge .....
Atlas Imperial Diesel Engine Co. ..
Auer, C. L., and W. W. 85
Axelson Manufacturing Company .. 46

B

Babcock & Wilcox Tubes 66
Badger & Sons Co., E. B. .....
Bakelite Corporation .....
Baker Oil Tools, Inc. 18
Barber-Greene .....
Baroid Sales Company .....
Barret, William M., Inc. .....
Barrett Company, The .....
Beaumont Iron Works Co. .....
Bethlehem Steel Co. 1
Boston Woven Hose & Rubber Company .....
Bovaird Supply Co., The .....
Bowen, S. R., Co. .....
Bradford Motor Works, Inc. .....
Brewster Company, Inc., The .....
Bridgeport Machine Company 55
Broderick & Bascom Rope Co. 13
Brown Instrument Co., The .....
Buckeye Traction Ditcher Co., The
Buda Co., The .....
Butler Manufacturing Co. .....
Byron Jackson Co. .....

C

Cameron Iron Works, Inc. 50
Carnegie-Illinois Steel Corporation..
Carson Machine & Supply Co. .....
Cast Iron Pipe Research Association, The .....
Caterpillar Tractor Co. .....
.....Inside Front Cover
Chain Belt Company .....
Chaplin-Fulton Mfg. Co., The 85
Chapman Valve Mfg. Co., The .....
.....Inside Back Cover
Chemical Process Co., Inc., The ... 58
Chevrolet Motor Company .....
Chicago Bridge & Iron Works ....
Cities Service Oil Co. .....
Clark Bros. Co. .....
Classified Advertising 110-111
Cleveland Trencher Company, The..
Climax Molybdenum Company 8
Columbian Steel Tank Co. 15
Combustion Engineering Company.. 86
Continental National Bank of Fort Worth .....
Continental Oil Co. .....
Continental Supply Company, The.. 31
Cooper-Bessemer Corp., The .....
Coppus Engineering Corp. .....
Crane Co. .....
Crosby Steam Gage & Valve Co. ...
Crutcher-Rolfs-Cummings, Inc. ....
Cummins Engine Company .....
Curtin, W. H., and Co., The .....

D

D + B Pump & Supply Company...
Darling Valve & Mfg. Co. .....
Dart, E. M., Mfg. Co. .....
Davis Emergency Equipment Co. ..
Davis Regulator Co. 83
Dean Core Barrel Manufacturing Sales & Service .....
Dearborn Chemical Company .....
Devine, J. P., Mfg. Co., Inc. 44
Dewey Portland Cement Co. .....
Diamond Chain & Mfg. Co. .....
Dodge Mfg. Corporation .....
Dodge Division of Chrysler Corp. ..
Doheny Stone Drill Co.....Front Cover
Dowell, Incorporated 16
Dresser, S. R., Mfg. Co. .....
DuPont DeNemours & Co., Inc., E. I. 74

E

Eagle-Picher Lead Co. .....
Eastman Oil Well Survey Co. ....
Economy Electric Lantern Co. ....
Edwards Valve & Mfg. Co., Inc., The
Eiche, R. J. .....
Emsco Asbestos Company .....
Emsco Derrick & Equipment Company .....
Ensign Carburetor Company, Ltd. ..
Ethyl Gasoline Corporation .....
Everstick Anchor Co. .....

F

Failing Supply Co., Geo. E. .....
Fairbanks-Morse .....
Filtrol Co. of California .....
Firestone Tire & Rubber Co. .....
First National Bank, Fort Worth..
First National Bank & Trust Co. of Tulsa, The 71
Fisher Governor Company .....
Fluor Corporation, Ltd. .....
Foote Bros. Gear and Machine Co...
Ford Motor Co. .....
Fort Worth National Bank, The ..
Four Wheel Drive Auto Co., The ..
Foxboro Co., The .....
Frick-Reid Supply Corporation ....

G

Gardner-Denver Company .....
Garlock Packing Company, The ..
Gaso Pump & Burner Mfg. Co. ...
Gasoline Products Co., The .....
Gates Rubber Co., The .....
Gatke Corporation .....
Gearench Mfg. Co. .....
General American Tank Storage and Terminal Co., Inc. 75
General Electric Company .....
General Motors Truck Co. .....
General Paint Co. .....
General Power, Inc. .....
Geophysical Service .....
Gilmer Company, L. H. .....
Goodrich Company, B. F. .....
Gott, H. P., Mfg. Co. 92
Grant Oil Tool Company .....
Gray Processes Corporation, The... 10
Great Lakes Fuel Corporation, The. (Distributors for Great Lakes Coal & Coke Co.)
Green Head Bit & Supply Co. .....
Guiberson Corporation, The .....
Gulf Refining Co. .....
Gulf States Utilities Company .....

H

Halliburton Oil Well Cementing Co.
Hanlon-Buchanan, Inc. .....
Happy Belting Company .....
Harrisburg Steel Corporation .....
Hazard Wire Rope Company .....
Heeter, C. M., Sons Co. .....
Hercules Tool Company .....
Hewitt Rubber Corp. .....
Hills-McCanna Co. .....
Hinderliter Tool Company .....
Hoard Exploration Co. .....
Hopper Machine Works, Inc. .....
Hough Mfg. Co., The Charles N. ...
Houston Oil Field Material Company 63
Hughes Tool Co.....Back Cover
Humble Oil & Refining Co. .....
Hyatt Roller Bearing Co. .....
Hydril Co. .....Front Cover

I

Independent Exploration Company..
Ingersoll-Rand Co. .....
International Derrick & Equipment Co., The .....
International Filter Co. .....
International Harvester Co. of America, Inc. .....
International Nickel Company, Inc. The .....

J

Jarecki Manufacturing Company ..
Jeffrey Manufacturing Co., The ...
Jenkins Bros. .....
Jensen Brothers Manufacturing Co..
Jerguson Gage & Valve Co. 87
Johns-Manville Corporation 89
Johnston & Jennings Co. (Oceco Division) .....
Jones & Laughlin Steel Corporation

K

Kellogg, M. W., Company, The....
Kennedy Valve Mfg. Co., The .....
Kerotest Manufacturing Co. .....
Key Company .....
Keystone Driller Co. 87
Kibele Manufacturing Co. 81

L

Landis Machine Co., Inc. .....
Lane-Wells Co., The .....
Larkin Packer Co. .....
Layne and Bowler Co., The 77
Layne & Bowler, Inc. 83
Leach Co., C. H., Inc 85
Leeds & Northrup Company .....
Leonard Construction Co. .....
Leschen, A., & Sons Rope Co. .....
Lewis, M. J., Oilwell Service .....
Lincoln Electric Company, The ...
Linde Air Products Co., The .....
Linear Packing & Rubber Co., Inc.
Link-Belt Company .....
Louisiana Chemical Company, Inc...
Lucey Products Corporation .....
Ludlow Valve Mfg. Co., The .....
Lufkin Foundry & Machine Company .....
Lufkin Rule Co., The .....
Lummus Co., The 12
Lunkenheimer Co., The .....

Mc

McCord Radiator & Mfg. Co. .....
McEvoy, J. H., & Co. .....
McGregor Working Barrel Company 93
McKissick Products .....

M

MacClatchie Manufacturing Company 45
Macmillan Co., The 93
Macwhyte Co. 3
Maloney, F. H. .....
Maloney Tank Mfg. Co. .....
Manhattan Rubber Mfg. Division, The .....
Mansel Brothers Company .....
Marmon-Herrington Co., Inc. .....
Martin-Decker Corp. 67
Mason-Neilan Regulator Co. .....
Mathey Machine Marks, C. A. .....
Mattison-Wallack & Co. .....
Medart Company, The .....
Mepham, Geo. S., Corp. .....
Merco Nordstrom Valve Co. .....
Midco Tool & Supply Co. .....
Midwest Piping & Supply Company, Inc., The .....
Miller Fuel Engineering Co., Inc. ..
Miller Sand Pump Co. .....
Mission Mfg. Co., The 11
Monsanto Chemical Company .....
Moore, Lee C., & Co., Inc. 37
Moorlane Company 85
Muskogee Iron Works .....

N

National Bank of Tulsa .....
National Carbon Company, Inc. 69
National Lead Co. .....
National Supply Co., The 43
National Tank Company .....
National Transit Pump & Machine Co. .....
National Tube Co. .....
Naylor Pipe Company .....
New Deal Specialty Co., The.....
Norvell-Wilder Supply Company ...
Nueces County Navigation Commission .....
Nugent, Wm. W., & Co., Inc., Mfrs.

O

O'Bannon Co., Walter 77
Oceco Fittings .....
Oil Center Tool Co. .....
Oil Well Improvements Co. .....
Oil Well Supply Company .....
Oklahoma Portland Cement Co. ...
Oliver United Filters, Inc. .....
Otis Pressure Control, Inc. .....
Owens-Illinois Glass Company ....
Oxweld Acetylene Company .....

P

Page Steel & Wire Division of the American Chain Company, Inc..
Parkersburg Rig & Reel Co., The.. 2
Parsons Co., The Ralph M. .....
Patterson-Ballagh Corporation ....
Penberthy Injector Co. .....
Pennsylvania Grade Crude Oil Association .....
Petroleum Electric Power Club ... 65
Petroleum Equipment Company ..
Petroleum Iron Works Company ..
Petroleum Rectifying Company of Calif. .....
Petroleum Specialty Company, The..
Petty Geophysical Engineering Co..
Phoenix Chemical Laboratory ....
Pittsburgh-Des Moines Steel Company .....

P

Pittsburgh Equitable Meter Co. ...
Pittsburgh Steel Company .....
Polymerization Process Corporation, The .....
Portable Rig Company, Inc. .....
Prest-O-Lite Company, Inc., The...
Pure Oil Co. .....

R

Ratigan, J. P. .....
Reading-Pratt & Cady 74
Rector Well Equipment Co., Inc....
Reed Roller Bit Company 63
Regan Forge & Engineering Co.... 63
Reid, Jos., Gas Engine Company..
Reilly Tar & Chemical Corporation
Republic Rubber Co., The 6
Republic Steel Corporation .....
Roebling's, John A., Sons Co.....
Ryerson & Son, Inc., Joseph T.... 87

S

Schlumberger Well Surveying Corporation .....
Security Engineering Co. .....
Shaffer Specialty Co., The .....
Shaffer Tool Works 76
Shand & Jurs Co. .....
Sharples Specialty Co., Inc.....
Shell .....
Shull Perforator Co. .....
Sinclair Refining Company, Inc. ....
Skinner Co., M. B. .....
Smith, A. O., Corporation 4-5
Smith Company, E. M. .....
Smooth-On Mfg. Co. .....
Socony-Vacuum Oil Co., Inc. 14
South Chester Tube Co. .....
Spang, Chalfant & Co., Inc.....
Spang and Company .....
Sperry-Sun Well Surveying Co. ... 87
Square D Company, Inc. .....
Stahmer Shoe Company, F. H. ....
Standard Brake Lining Co. .....
Star Drilling Machine Company ...
Star Manufacturing Company .....
Staynew Filter Corporation 7
Stone Oil Tool Company .....
Stork Engineering Company .....

T

Taubman Supply Corporation .....
Taylor Forge & Pipe Works .....
Taylor Instrument Companies ... 49
Texas Chemical Company .....
Texas Iron Works .....
Thermoid Rubber Co., The .....
Thornhill-Craver Co., Inc. .....
Timken Roller Bearing Company ..
Timken Steel & Tube Co. 9
Titusville Iron Works Co., The ...
Tnemec Company, Inc. .....
Tobin, Edgar, Aerial Surveys .....
Toledo Pipe Threading Machine Co.
Tretolite Co. .....
Tube Turns, Inc. .....
Tulsa Chamber of Commerce .....
Tulsa Winch Mfg. Co. .....
Twin-Disc Clutch Co. .....

U

Union Carbide & Carbon Corporation
Union Carbide Sales Company ....
Union Rubber & Asbestos Co.....
Union Wire Rope Corporation ....
United American Bosch Corp. ....
United States Rubber Company...
United Supply & Mfg. Company ..
U. S. Steel Corp., Subsidiaries....
Universal Oil Products Co. 34

V

Vellumoid Co., The .....
Vernon Tool Co., Ltd. 63
Vinson Supply Co. .....
Vogt, Henry, Machine Co. .....
Vortox Manufacturing Company ...

W

Wall Rope Works, Inc. .....
Walworth Company .....
Warren Petroleum Company .....
Waukesha Motor Company .....
Westcott & Greis, Inc. .....
Wheeling Machine Products Co. ... 92
Wickwire Spencer Steel Company..
Wilson-Snyder .....
Williams & Co., J. H. .....
Williamsport Wire Rope Co. .....
Wilson Manufacturing Co. .....
W. K M. Co., Inc. .....
Worthington Pump & Machinery Corporation .....

Y

Yale & Towne Mfg. Co., The .....
Young Engine Corp. .....
Youngstown Sheet & Tube Co., The

Oil Man's Calendar

September

Week of 28—Indianapolis, Ind., National Tax Conference.

7—Tulsa or Oklahoma City, American Petroleum Institute, Division of Production, Mid-Continent district.

29—Wichita, Kans., regional technical meeting, W. P.R.A.

October

1-2—Los Angeles, Calif., A.I.M.E. Petroleum Division.

5-9—Atlantic City, N. J., National Safety Congress, Petroleum Section.

6-9—Richmond, Va., North American Gas Tax Conference.

8-9—Fort Worth, Tex., Oil and Gas Section, A.I.M.E., Blackstone Hotel.

8-9—Tulsa, National Road Oil and Asphalt Congress, fifth annual session, Hotel Tulsa.

12-13—Chicago, National Association of Lubricating Grease Manufacturers, Stevens Hotel.

13—Tulsa, regional technical meeting, W.P.R.A.

21-22—Indianapolis, Ind., Indiana Independent Petroleum Association, Hotel Severin.

25-30—Atlantic City, N. J., first annual convention, Association of Gas Appliance & Equipment Manufacturers. Annual convention American Gas Association, Atlantic City Auditorium.

27—Wichita Falls, Tex., regional technical meeting, W.P.R.A.

27-29—Chicago, National Oil Marketers Association annual convention, Stevens Hotel.

November

3—Shreveport, La., regional technical meeting, W.P. R.A.

9-12—Chicago, American Petroleum Institute, 17th annual meeting, Stevens Hotel.

20—Tulsa, annual meeting, Kansas-Oklahoma division, Mid-Continent Oil and Gas Association.

November-December

30-Dec. 1—Oklahoma City, Okla., Independent Petroleum Association, Biltmore, annual meeting.

December

4—Houston, Tex., annual meeting, Texas division, Mid-Continent Oil and Gas Association.

5-13—Detroit, Mich., First International Consumers Petroleum Exposition.

6-11—New York, National Exposition of Chemical Industries, Grand Central Palace.

15—Tulsa, annual meeting directors, Mid-Continent Oil and Gas Association.

February, 1937

8-10—Louisville, Ky., Kentucky Petroleum Marketers Association, Brown Hotel.